



UNITED STATES AIR FORCE
MILITARY AFFILIATE RADIO SYSTEM

NATIONAL TRAINING MANUAL

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Supersedes all previous versions

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Section I

Voice Operations Training Guide

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Preface

To all MARS members:

You will find overprinted forms, blank forms, charts, and other reference documents as attachments to this document. These are included for your benefit and use throughout your MARS career.

We suggest that you make copies of all of the forms for your use and pass copies to other members who do not have them.

NOTE: Keep the original copies in a folder for later use in making more copies. Try to use originals as “master” for copies, since copies tend to get worse as they are copied.

LISTEN, LISTEN, LEARN IS GOOD ADVICE!

On many nets you will pick up useful information, but be careful that this information is correct. When in doubt, ask someone like your Training Director, State MARS Director (SMD) or a Region or Area official. Remember, we are all here to assist you in any way we can.

“There is no such thing as a dumb question!” The only dumb question is one that is not asked.

FROM YOUR DIRECTOR AND TRAINING DIRECTOR

AIR FORCE MARS

To: **All new members, /T calls**

You have been accepted into an elite organization that is tasked with providing emergency communications support for the United States Air Force and other Government Agencies, which include the Federal Emergency Management Agency (FEMA), the Shared Resources (SHARES) HF radio program, and other agencies of the Department of Defense and U.S. Government.

The opportunities offered by MARS for you to serve in public service support are limited only by your willingness to participate in the many programs that make this a unique organization.

Examples of some of the services offered by MARS are:

1. Dispatch of health, morale and welfare traffic to and from military service personnel world-wide.
2. Disaster communications support for federal, state and civilian governmental agencies and other disaster relief organizations when requested.
3. Engineering and technical support in all communications systems to continue state-of-the-art readiness status.
4. Management training for local military base support positions.

Air Force MARS utilizes both voice and digital modes.

You will first be trained to use the correct radiotelephone procedures required for communications support of military and allied national forces. Additional training is available for those members that desire to use digital capabilities.

After you have completed your initial training assignment you will then be re-assigned to the traffic net system in your MARS Area. This will be your primary assignment but you may participate in as many nets of the Air Force MARS program as you desire (excepting special assignment nets).

The expansion of your own horizons through your association with Air Force MARS and the members of this organization are limited only by your desire and capability.

Operations on USAF MARS is governed primarily by three documents: *Allied Communications Publication Communication Instructions Radiotelephone Procedures ACP 125(F)* (see Attachment 7), *U.S. Military Affiliate Radio System (MARS) Joint Air Force, Army, Navy-Marine Corps Standard Operating Procedure for Calling and Operating a Voice Net* (see Attachment 6), and *Air Force MARS Operating Instructions* (see Attachment 5). These documents are found in the attachments and the reader is directed to these for fuller commentary on the subjects contained in this guide. It is not the intent of this guide to cover all the material in these governing documents. It is the intent of this guide to cover the most salient and important aspects of those documents.

NOTE: The attached documents are current as of the date of this Training Guide. The documents are periodically revised and updated. It is the responsibility of each USAF MARS member to maintain access to and be familiar with the most current issue of these documents.

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CHAPTER 1

TRAINING REQUIREMENTS

When you received your MARS station license and call sign assignment, you became a licensed MARS operator. You will be operating your amateur station on military frequencies, so a brief period of training is required to help you become familiar with MARS procedures. As a MARS volunteer you are essentially agreeing to operate your station, for a minimum of 12 hours each calendar quarter, on the established MARS networks. Six of these hours must be on your Primary Assignment. While you are in training, your primary assignment is Training. The additional 6 hours may be accrued on any Region or Area or State net. You should participate in (check in to) your State Administrative and the Region and Area Administrative Nets. When you have completed training almost all MARS nets will be open to you. The training assignment is temporary. When you complete training, you will receive a permanent assignment and the 12 hour requirement will then apply to that assignment.

You are encouraged to complete training as soon as possible. There is no minimum time for training; however, you must complete your training within 180 days of the date on the AF Form 3661 which assigns you to training. When you feel that you are familiar with on-the air MARS procedures, you may demonstrate this by sending at least two “Drill” messages to your trainer. One of these messages must be an Exercise EEI. You are strongly encouraged to use a digital mode for one of these messages. Upon successful completion of these drill messages, you will be required to complete a “final examination” consisting of 50 questions. A score of 85% or better is required. You will also need to complete NCS training and demonstrate your capability as an NCS before you are released from training.

Training on USAF MARS procedures is necessary even though you may be an experienced operator since MARS procedures are based on military procedures rather than amateur radio procedures. These MARS procedures have been developed over the years to facilitate rapid communications while emphasizing accuracy. All three MARS services have agreed to use a common procedure (See Attachment 6 for the tri-service MARS *Standard Operating Procedure for Calling and Operating a Voice Net*) in order to allow for interoperability among the services. Trained USAF MARS operators are welcome to participate in Army or Navy/Marine-Corps MARS nets. If you choose to participate in nets of the other MARS services, be certain to observe and follow any unique policies and/or procedures you may observe.

In most Regions and Areas, training nets are held on the Area frequency at regularly scheduled times. The schedule for training nets should have been provided to you along with the AF Form 3661 which assigned you to training. You may contact your Region or Area Training Director with any questions about the scheduled training nets. Other opportunities to receive training in a classroom situation may be made available to you. Information on these opportunities is provided by your Region or Area Training Director.

As a MARS volunteer operating on USAF frequencies, you have essentially agreed to donate your time and equipment in support of the USAF MARS mission and to participate for a minimum time each calendar quarter. To successfully operate on the Air Force networks, you will need to learn the prowords, net procedures, message format and message handling techniques that are unique to MARS. The goal of our training is to develop a system of skilled and active radio operators who can provide expertise in achieving our “Primary Mission”.

NOTE. Directives regarding prolonged periods of inactivity are quite clear. If at any time you find that you cannot meet minimum participation requirements, notify your State MARS Director or Net Manager of the duration and reason for your inactivity. Arrangements for extensions of time are easy to make if those arrangements are made before your membership is in jeopardy, but the responsibility for notifying the proper officials rests with you.

CHAPTER 2

MARS OVERVIEW

A BRIEF MARS HISTORY

The current MARS program is a result of development and evolution. It has been different things at different times. The first volunteer Amateur Radio operators to serve the U. S. military formed the Army Amateur Radio System (AARS) in November 1925. That operation continued until the start of World War II when Amateur Radio operations were ordered suspended. Army Amateur Radio was re-authorized in 1946. The U. S. Army and U. S. Air Force formed the Military Amateur Radio System in 1948. It was later renamed to Military Affiliate Radio System (MARS). In 1962, the Navy and Marine Corps MARS program was started.

MARS MISSION

The Mission of the MARS program is:

1. Provide Department of Defense sponsored emergency communications on a local, national and international basis as an adjunct to normal communications.
2. Provide auxiliary communications for military, civil, and/or disaster officials during periods of emergency.
3. Assist in effecting normal communications under emergency conditions;
4. Create interest and furnish a means of training members in military communications procedures;
5. Provide a potential reserve of trained radio communications personnel;
6. Handle morale and quasi-official record and voice communications traffic for Armed Forces and uniformed U. S. Government civilian personnel stationed throughout the world.
7. Conduct an appropriate Amateur Radio program as part of the annual celebration of Armed Forces Day.

The emphasis of the program has moved from one to another of these objectives over the history of the program. For example, during the Viet Nam era, MARS was very heavily involved with passing morale messages and phone patches between deployed military and their loved ones. That function has largely been taken over by the internet and cell phones. The present emphasis of the program is on providing communications to military, civil, and other disaster officials during periods of emergency, and providing them with information about the emergencies from within the affected area.

STRUCTURE AND ORGANIZATION

Air Force MARS is a communication system made up of amateur radio operators who are trained to provide an emergency back-up for the USAF Communications Command. This is the primary mission. Even though we engage in other activities, these activities are all intended to support the primary mission either directly or indirectly.

For administrative and communication purposes, USAF MARS is organized by geographic units. States are grouped into Regions: Regions into Areas. The Areas are linked by Transcontinental Nets: (TRANSCON) Voice, TRANSCON DIGITAL (Sound Card Modes) and TOR BBS system. The transcontinental, Area and Region nets are managed by affiliate members on both the evening and daytime nets as well as on the weekends. At the Region level, affiliate members will receive the traffic for direct delivery to the addressee, relay to other MARS channels or re-file into the Amateur Band. Each relay is expected to move the traffic closer to its final destination until delivery by local telephone is possible. Since this is not always possible, we rely on member's dedication and ingenuity to devise methods of delivery. Forwarding by radio is encouraged, so a process for re-filing messages into the Amateur Band to be delivered by the National Traffic System is authorized. This re-file process is explained in Chapter 7.

Traffic originating locally will be routed in the reverse order. Traffic destined for a state in the same Region or Area as its origin will be passed on Area nets but traffic for another Area must be routed into the TRANSCON network for relay into the Area of destination or the Area of the proper gateway station.

State Admin nets are conducted on the Area frequencies for administrative purposes so members may have contact with their State MARS Directors. While these nets are open to all members in an Area, the primary purpose is for state administrative business. Traffic may be passed on the state nets when all state business has been completed.

You are encouraged to participate in all the MARS Networks, but keep in mind that while you are in training you are restricted to State, Region and Area traffic and administrative nets. The Administrative nets, the Area or Region Training nets and your own State Administrative net should provide you with current information.

The total MARS program is administered through the office of Chief USAF MARS at HQ AFCA at Scott Air Force Base, IL. Affiliate management is through the State MARS Directors (SMD) and Region MARS Director (RMD) and Area MARS Director (AMD). SMD, RMD and AMD are affiliate positions appointed by Chief USAF MARS. Each AMD and RMD appoints a staff of Area and Region Officials who help with various activities. Area and Region Officials are authorized specific "billet call signs" that may be used while conducting activities related to the duties of their office. Each SMD may appoint a staff of State Officials to help with various aspects of state-level activities. State-level appointments do not normally authorize a specific "billet call sign". In addition to the Area, Region and state officials there are a few "National" Officials who have duties which are CONUS wide and are authorized the use of certain billet call signs. (See page 2-3 for a partial listing of billet call signs authorized for Area, Region and National Officials.)

CALL SIGN ASSIGNMENTS

After training is completed, each affiliate is assigned a personal call sign that will remain with the member as long as the member resides in the original region. The “/T” suffix in your present call sign will be dropped to form your permanent call sign. e.g. AFA3AA/T becomes AFA3AA etc. If a member is appointed to an official position he will receive an additional call sign that will remain with the member for the duration of the appointment. The numeral in a call sign indicates the Region of residence licensing. If you should hear any Military Base MARS stations, they are assigned the prefix AGA, the Region numeral and a suffix that reflects the abbreviation of the base. e.g. AGA6TI (Tinker AFB OK) AGA9TR (Travis AFB CA) etc. Exception to this is AGA5HQ which is the call sign assigned to the USAF MARS Headquarters station.

Here is a partial list of representative Official Call signs and duties. The “#” will be a single numeral indicating the MARS Region of residence. The “aa” indicates the Area (NE, SE, NC, SC, NW or SW). The “ss” is the 2-character US Postal Service state abbreviation.)

AREA OFFICIALS

AFN#aa - Area MARS Director
AFD#aa - Deputy Area MARS Director
AFE#DM - Area Digital Manager
AFE#EC - Area Emergency Communications (ECOM) Coordinator
AFE#RM - Area Records Manager
AFE#XC - Area Exercise Coordinator
AFF#VF - Area VHF Repeater, Digital Network & Voice Operations Coordinator
AFE#WM - Area Webmaster

REGION OFFICIALS

AFN#RD - Region MARS Director
AFD#RD - Deputy Region MARS Director
AFF#DM - Region Digital Manager
AFF#EC - Region Emergency Communications (ECOM) Coordinator
AFF#RM - Region Records Manager
AFF#PI - Region Public Information Officer
AFF#TD - Region Training Director

STATE OFFICIALS

AFF#ss - State MARS Director
AFD#ss - Deputy State MARS Director
AFE#ss - State Emergency Coordinator

NATIONAL MARS OFFICIALS

AGA5C - Chief USAF MARS
AFN#LE - National ALE Coordinator
AFN#TS - National Technical Services Manager
AFN#EC - National Emergency Coordinator
AFN#PP - National Phone Patch Manager
AFN#TD - National Training Director
AFN#DM - National Digital Manager
AFN#VN - National HF Voice Net Manager

This is not a complete list but should give you some idea of the system and will help you recognize officials and their duties when you hear these call signs on the air.

NETWORK CALL SIGNS

Networks are assigned distinctive call signs or net designators which identify the geographic coverage, type of net and the mode of communication.

NOTE : All USAF MARS high frequency voice nets operate on upper sideband.

TRANSCON & NATIONAL NETS

<u>Net Call Sign</u>	<u>Description</u>	<u>Mode</u>
TRANSCON	TRANSCON National Voice Net	USB
TDN	TRANSCON Keyboard-to-Keyboard Digital	Sound Card Digital Modes – usually MFSK16
TRANSCON Multi-Mode Net	TRANSCON MULTI-MODE NET	Net opens in USB and may switch to MT63 or other digital modes.
TRANSCON Space Support Net	TRANSCON Space Support Net	USB

AREA TRAFFIC NETS

Network Call Signs for Area Traffic nets are of the format *AAm#* where *AA* denotes the Area (NE, SE, NC, SC, NW or SW); *m* denotes the mode (S for USB, M for Mixed mode, D for Digital or F for FM) and *#* denotes net number

EXAMPLES:

NEM1 = Northeast Area Multi-Mode Traffic Net #1

NCD1 = North Central Digital Keyboard-to-Keyboard Traffic Net #1

NWS1 = Northwest Area SSB Voice Traffic Net #1

OTHER AREA NETS

Network Call Signs for other Area nets are of the format *AATTm#* where *AA* denotes the Area (NE, SE, NC, SC, NW or SW); *TT* denotes the net type (AD for Administrative Net, EC for ECOM Net, TG for Training Net, TS for Technical Service Net, or XC for Exercise Net); *m* denotes the mode (S for USB, M for Mixed mode, D for Digital or F for FM) and *#* denotes net number

EXAMPLES:

NEADS1 = Northeast Area Administrative SSB Voice Net #1

NETSS1:= Northeast Area Technical Services SSB Voice Net #1

NETGS1 = Northeast Area SSB Voice Training Net #1

NETGS2:= Northeast Area SSB Voice Training Net #2

NWTGD1:= Northwest Area Digital Training Net #1

SCXCM1 = South Central Multi-Mode Exercise Net #1;

SCECM1:= South Central Multi-Mode ECOM Net #1;

REGION NETS

Network Call Signs for Region nets are of the format *RTTm#* where *R* denotes the Region (1 through 0); *TT* denotes the net type (AD for Administrative Net, EC for ECOM Net, TG for Training Net, TS for Technical Service Net, or XC for Exercise Net); *m* denotes the mode (S for USB, M for Mixed mode, D for Digital or F for FM) and *#* denotes net number

EXAMPLES:

4ADS1 = Region Four SSB Voice Administrative Net #1
4TGS1 = Region Four SSB Voice Training Net #1
4TGM1 = Region Four Multi-Mode Training Net #1
6ADS1 = Region Six SSB Voice Administrative Net #1
6TSS1 = Region Six SSB Voice Technical Services Net #1
6TGM1 = Region Six Multi-Mode Training Net #1

STATE NETS

Network Call Signs for State nets are of the format *RSSm#* where *R* denotes the Region (1 through 0); *SS* denotes the two character postal code; *m* denotes the mode (S for USB, M for Mixed mode, D for Digital or F for FM) and *#* denotes net number

EXAMPLES:

3VAS1 = Virginia State SSB Net #1
2NYS1 = New York State SSB Net #1
1VTF1 = Vermont State FM Voice Net #1
4ALS1 = Alabama State SSB Voice Net #1
5WIM1 = Wisconsin State Multi-Mode Net #1
6NMD1 = New Mexico State Digital Net #1

This is a partial list of the various Networks and activities, but should give you an idea of the system used for network call sign assignments.

CHAPTER 3

BASIC PROCEDURES

As you begin your activity in MARS there are a few basic procedures that will become evident. All USAF MARS nets are directed nets. i.e. they are directed by a net control station and set procedures will prevail. Initial transmissions will contain your call sign at the beginning. After the initial call between two stations, call signs may be dropped unless confusion is likely to arise by so doing. Administrative, training, and technical nets are often conducted informally. Traffic nets however, are always conducted formally. The term ‘informal’ refers to the use of first names and a few more relaxed procedures that will become evident as you monitor the various nets.

Formality will always be maintained during the following procedures—

1. When checking into a net.
2. When initially establishing contact.
(Both when calling a station and when answering a call.)
3. When receiving a message.
4. When sending a message.
5. When answering Roll Call.

Informality may be allowed on a traffic net when the NCS has given permission for an “informal”. This will allow informal comments between members on the net. Generally informal procedure will be allowed only after all of the traffic that can be passed, has been passed.

IMPORTANT: Every transmission, whether formal or informal, ends with either of the two prowords—**OVER** or **OUT** but never both.

OVER means that you are expecting a reply and is the signal to the other station indicating that he may transmit without interference.

OUT means that this is the last transmission of an exchange and no reply is necessary. When one station says **OUT**, that is the end of an exchange and the other station should not add another **OUT**. If there is more to be transmitted, you must re-establish contact by the calling method explained in the next section of this guide.

MARS Communications are generally “Point-to-Point”, or one station communicating with another, one at a time. Authorized exceptions to this rule are: Net Control Stations when making net calls, and stations sending bulletins. Round table discussions are not allowed on the MARS circuits. If you must communicate with more than one station, you must say “**OUT**” when you have completed with one and then establish contact with the next station. After you have had a chance to monitor a few nets, you will see that this is not as complicated as it sounds. For years the above procedures have proved to contribute to effective and efficient communications. They are not intended to be restrictive and we continue to use them because not only are they mandated by our governing documents but they work well.

CHAPTER 4

CALLING AND ANSWERING PROCEDURES

A “preliminary call,” sometimes referred to as simply a “call,” is made to initiate a contact. An “answer” is a reply to a call.

PRELIMINARY CALLS

There are three types of preliminary calls; a single call, a collective call (also known as a group or net call), and a multiple call. Examples of each of these are as follow:

1. **SINGLE CALL** – One station calls another station to initiate communications. Example: AFA1AA, THIS IS AFA1BB, OVER
2. **COLLECTIVE CALL** (or Net Call or Group Call) – One station (such as a Net Control Station) calls a groups of stations collectively. A preliminary call to open a net is an example. Example: NEM1, THIS IS AFA1XX (NCS), OVER. Sometimes, “Limited Collective Calls” may be used, where the NCS may call for only part of the whole group. Example: NEM1, THIS IS AFA1AA, STATIONS WITH TRAFFIC, OVER. In that case, the NCS expects to hear only answers from stations with traffic.
3. **MULTIPLE CALL** – One station calls a number of specified stations. Example: AFA1AA, AFA1BB AND AFA1CC, THIS IS AFA1XX, OVER.

ANSWERING A PRELIMINARY CALL

When answering a preliminary call, a MARS operator will use either “Full Procedure” or “Abbreviated Procedure.”

Full procedure means the transmission begins with the call sign of the station to whom the answer is directed. Example: AFA1BB THIS IS AFA1AA, OVER.

Abbreviated procedure means the transmission begins with the proword THIS IS followed by the call sign of the station transmitting. Example: THIS IS AFA1AA, OVER.

Usually, abbreviated procedure is used to answer a Single Call (including continuity checks) and Multiple Calls. In the case of Multiple Calls, the stations answering should answer in the order in which they were called. A net control station may direct stations to “USE FULL PROCEDURE” if he/she feels it necessary or desirable. In such case, of course, stations will follow the directive of the NCS and use full procedure. If communications conditions are difficult, a station answering a single call may find it desirable to use full procedure to answer as a way of confirming his/her understanding of who was calling. However, because of the extra airtime involved, this use of full procedure should be limited.

Full procedure (with phonetics) will be used when checking into nets unless directed otherwise by the Net Control Station. Example: (for the Collective call by the NCS) SCS1, SCS1, THIS IS ALPHA, FOXTROT ALPHA ONE ALPHA ALPHA, OVER, the answer using full procedure) would be:

AFA1AA, <pause> THIS IS ALPHA FOXTROT ALPHA ONE X-RAY X-RAY SLANT TANGO,
NO TRAFFIC, OVER.

And the NCS response would be:

ALPHA FOXTROT ALPHA ONE X-RAY X-RAY SLANT TANGO, THIS IS ALPHA,
FOXTROT ALPHA ONE ALPHA ALPHA, ROGER, OUT

(Note the use of phonetics for your own call sign when initially checking into a net. If you feel it is necessary to prevent confusion, or that conditions are poor you may elect to use full phonetics for the Net Control's call sign as well as for your call sign.)

Once communications have been established between two stations, both should use abbreviated procedure until the communications is concluded. Example:

(preliminary, single call using full procedure): AFA1AA, THIS IS AFA1BB, OVER

(answer using abbreviated procedure): THIS IS AFA1AA, OVER

(communications): THIS IS AFA1BB, REQUEST YOU DO

(communications): THIS IS AFA1AA, WILCO, OUT.

Caution: Do not confuse “abbreviated procedure” with “abbreviated call signs.” Abbreviated call signs are **not** authorized in USAF MARS.

CHAPTER 5

NET OPERATIONS

AUTHORIZED NETS

Current directives allow stations in training to participate only in State, Region and Area nets. Once training has been completed, there are numerous networks available. In addition to the various State Area and Region nets, MARS stations that have completed training are authorized to participate in the various transcontinental nets. (TRANSCON Voice, TRANSCON CW, TRR and TVRS digital Nets). There are a few restricted nets such as overseas Phone Patch Nets. Membership on phone patch nets is by special appointment through your SMD and the special net managers.

DIRECTED NETS

All USAF MARS nets are directed by a Net Control Station (NCS). You will be able to identify the purpose for a net, the call sign of the NCS and the mode of transmission by the Collective Call being used. e.g.

NCS1 THIS IS AFA3AA OVER (North Central Area Traffic Net)
3TGS1 THIS IS AFF3TO OVER (Region 3 Training net)
3ADS1 THIS IS AFN3RD OVER (Region 3 Administrative net)
3ILS1 THIS IS AFF3IL OVER (Illinois Admin. net)
3KSF1 THIS IS AFA3IU OVER (Kansas VHF Net on FM Voice)

HOW TO CHECK IN

It is essential that every station, before transmitting, listen carefully to avoid doubling. Key down, state the NCS call sign, let up momentarily to again be sure of no doubling, then complete the transmission if the frequency is clear.

When you check in to a net, you are answering a collective call made by the NCS. Here are some examples of answers to that call.

AFA1BB <pause> THIS IS AFA3AA/T NO TRAFFIC OVER
AFA2CC <pause> THIS IS AFA2PO ONE ROUTINE AFA4AA OVER
AFA4DD <pause> THIS IS AFA4CC ONE PRIORITY AFA5CC, ONE ROUTINE SEATTLE
OVER

On your initial call to check in to a net always use full phonetics for the NCS call sign and your call sign. On subsequent calls, after the NCS has you on his roster, phonetics are not necessary. Use of phonetics is sometimes still advisable to prevent misunderstanding when propagation is poor or the frequency is noisy. As a new member in training checking in to a training or admin net you would say—
(NCS call sign) <pause> THIS IS (Your call sign) (traffic status) OVER
e.g. AFA5EE <pause> THIS IS AFA5AA/T NO TRAFFIC OVER

If you have comments or queries, you would state that in your check in —
(NCS call sign) <pause> THIS IS (Your call sign) (Comment or Query status) OVER
e.g. AFA6FF <pause> THIS IS AFA6AA/T WITH QUERIES OVER

After completing your call to check in, listen carefully to be certain that the NCS has recorded your call sign correctly. Your credit for participation is dependent on this and the NCS will report your time to a Net Manager who will in turn report to the Region or Area Records Manager.

NET ACTIVITY

After you have checked into a net, you are expected to remain available to the net for any traffic that might be destined for your immediate area. You will be listed on the NCS log and should remain available until the NCS closes the net. If you need to leave the frequency early, call the NCS and request to CLOSE. Once you are checked on to a net you can gain the attention of the NCS with the abbreviated call. “THIS IS (Your call sign) OVER”. The NCS will answer with a full preliminary call using your call and his. When contact is established, make your request known to the NCS; e.g.
AFA6AA THIS IS AFA6BB/T REQUEST TO CLOSE OVER

NET CONTINUITY CHECK (Roll Call/Radio Check)

On most nets, with a duration of longer than one hour, the NCS may hold a Net Continuity Check. The purpose of the Net Continuity Check is to ascertain propagation conditions between the NCS and those stations checked into the net. The net continuity check consists of a roll call of the stations checked in. Your response will be a Radio Check. (MARS term for signal report). The NCS will announce that a Roll Call will follow and then proceed calling each station by their call sign only. Stations will answer with an abbreviated call and a Radio Check: e.g.
THIS IS AFA3AA LOUD AND CLEAR OVER

Other Radio Check reports might be—
GOOD AND READABLE
WEAK BUT READABLE
WEAK BARELY READABLE
WEAK UNREADABLE

Note: Do not include phrases such as “I have you”, “You are”, “Your signal is”, etc.

Roll Calls are held at the discretion of the NCS but usually not more than once an hour. On traffic nets of two hour duration roll is called approximately 5 minutes into the second hour. If the NCS for a one hour net chooses to make a Roll Call, this Roll Call will usually be at the half-hour.

When the NCS has completed Roll Call, the NCS may, at his/her option, attempt to contact any stations who did not respond during the Roll Call.

Stations who do not respond to the Roll Call will be shown as closed on the NCS log and unresponsive stations will no longer be considered to be checked into the net.

FREE NETS

A “Free Net” is a time when you may transmit without the permission of the NCS, as long as you are already checked in to the net. During a directed net the NCS may declare the net “Free”. At this time you may call any station on the net without first obtaining the permission of the NCS. All MARS procedures will still be used. The only thing that has changed is the need to contact the NCS first. The net will remain FREE until the NCS makes another Collective Call (Net Call). This Collective Call automatically puts the net back to a directed status. At certain times when a frequency is not in use and there is no net in progress, members may use the frequency to contact other MARS members if there is a valid reason to communicate. This is sometimes referred to as “FREE TIME”. If you plan to use one of the MARS frequencies, make certain that there is no net in progress and that you use the frequency for MARS related business only. While you may hear some friendly chatter from time to time, the MARS nets should not be used for casual “Rag Chewing”. If you are in doubt as to whether or not a net is in progress, use the regular check in procedure and a NCS should answer you if there is a net.

CHAPTER 6

MESSAGE FORMAT

PLAINDRESS MESSAGE FORMAT

The “Plaindress” message format used in MARS is simply a plain language form which is not encrypted or coded. This format contains three sections: a HEADING, a TEXT and an ENDING. Each of the sections is separated from the others with the proword BREAK. Many messages will have nothing in the “Ending” section.

The HEADING is divided into 4 components.

1. The Beginning Procedure
2. The Preamble
3. The Address (Both From and To)
4. The Prefix (Group Count)

The TEXT is the body of the message containing the information from the original sender to the addressee.

The ENDING, although not always used, is provided for any additional information dealing with relay instructions or delivery information needed to help move the message through the system.

HEADING

Consider now the four components of the Heading of a message.

1. The PROCEDURE

Sometimes called the Beginning Procedure consists of a Preliminary Call and the message serial number. Serial numbers begin with 1 and the count restarts each month.

e.g. AFA3AA THIS IS AFA3BB NUMBER SEVEN

This is the call sign of the receiving station, the call sign of the sending station and the message number assigned by the sending station. As this message is relayed through the MARS system, the Procedure is the one part and the ONLY part that changes on each relay.

2. The PREAMBLE

The Preamble consists of the Precedence Proword (MARSGRAM, ROUTINE, PRIORITY, IMMEDIATE or FLASH) followed by the proword TIME and the Date/Time Group (DTG). The DTG is composed of the six digit origination time (2 digit day, 2 digit hour and 2 digit minutes); the zone indicator (always Z – spoken as ZULU); the month; and the 4 digit year.

e.g. TIME ZERO ONE TWO TWO ONE FIVE ZULU JUNE TWO ZERO ZERO EIGHT

The first two numbers indicate the day of the month, the next two the hour and the last two the minutes. The letter “ZULU” at the end of the numbers indicates (Universal Time Coordinated). All official time keeping is done in UTC on the basis of the 24 hour clock. The Date/Time group is used as the reference identifier for all messages and is assigned by the Originating MARS Station at the time the message is introduced into the system.

3. The ADDRESS

This is the complete address of both the Originator and the Addressee.

The Address starts with the proword "FROM" followed by the originator's name and address. Some confuse the terms "originator" and "originating station". The "Originator" is the person or entity for which the message is being sent. The "originating station" is the MARS station entering the message into the MARS system. The originator and the originating station are the same when a MARS operator is sending a message on his/her own behalf; but, they are different when a MARS operator sends a message from a third party. If the Originator and the Originating Station are different, then the call sign and location of the Originating station appears after a "Slant Bar" (/). In voice procedure this is sent as SLANT at the end of the FROM section of the ADDRESS.

The complete address of the addressee is preceded by the proword "TO". This address must be complete enough to make delivery a simple matter for the final MARS station in the relay chain. Telephone numbers should be included in all addresses.

4. The PREFIX (Now Optional in USAF MARS)

The Prefix is simply the "Group Count" which is a number that reflects the number of words or groups in the text of a message. The group count is preceded by the proword GROUPS. Message texts are usually kept to 25 words or less. Messages may also be sent without a group count. In that case, the proword "GROUP NO COUNT" will be used instead of the proword GROUPS. This process should be used with judgment. When the group count is eliminated, a valuable check for accuracy has been lost.

The TEXT

The Text is the "body" of the message. It is the information being sent from the originator to the addressee. The proword BREAK indicates separation of the text from the heading and ending. BREAK appears at the beginning of the text and at the end of the text. This is the only way the proword "BREAK" is used. If you hear it used in place of "OUT", consider it an error in that operator's procedure. Each plain language word, each initial or group of initials, each numeral or group of numerals is counted as one group in the GROUP COUNT. Hyphenated words are counted as one group and are always spelled out for clarification. (More details on this are in the next section of the guide).

The ENDING

In our present format there is generally no ending. However, this section is provided to allow any "Operators Note" such as comments by any relaying operator who may have any observation concerning the message. If an operator's note is added along the relay chain, then it should be sent along with the message on each subsequent relay.

ABBREVIATED PLAINDRESS MESSAGE FORMAT

Operational requirements for speed of handling may require abbreviation of plaindress headings. In such case, any or all of the following may be omitted: (1) Precedence, (2) Date, (3) Date-time group, (4) Group count. The Abbreviated format is a very valuable tool to be used during emergencies when stations are in direct communication with each other and the expedient passage of traffic is a requirement

A message in abbreviated form will contain, at the very least, an address and a text. If the originator and the addressee are MARS stations and they are in direct communication with each other, then this highly

abbreviated form may be used. If there is any intermediate relay station involved, the DATE/TIME group must be used in case that message needs to be identified at a later time (The date/time group and the call sign of the originating station are always used to identify a message.)

The message number, precedence and group count may be eliminated if the message is between MARS stations and this elimination causes no confusion. Third party health and welfare messages will not be abbreviated. .

IMPORTANT REMINDER

Once a MARS message has been introduced into the system, the operator at the originating station is responsible for the content of the message and nothing following the Beginning Procedure may be changed in the message by any relaying station or operator. If a mistake is apparent, this may be pointed out in an Operators Note in the ending section. If an operator's note is added to the original message, it should remain with the message until delivery to the addressee.

SAMPLE MESSAGE

Beg.Procedure	{	AFA3AA THIS IS AFA3BB MESSAGE NUMBER ONE
Preamble	{	ROUTINE TIME ZERO FOUR ONE NINER THREE ZERO ZULU
	(	JUNE WUN NINER NINER FIVE
Address	(	FROM SGT. William Smith
	{	4th Infantry Btn.
	{	Ft. Sill, Ok 73503 /AFA4XX OK
	(	TO Mr. & Mrs. Joseph Smith
	{	11512 S. State
	{	Chicago, Il 60691
	{	302-921-0078
Prefix	{	GROUPS ONE SIX
		BREAK
Text	{	Enjoying new assignment will write long letter explaining new duties
	{	Hope to see you soon Bill
		BREAK
Ending	(	OP..Note Do not attempt delivery before 5 PM Chicago time.
		OVER

.....
Here is the same message as sent by digital means (AMTOR, PACTOR Packet or Sound Card,.etc.

Beg. Procedure	(	DE AFA3BB NR 1
Preamble	(	R 041930Z JUNE 1995
Address	(	FM SGT. WILLIAM SMITH
	(	4TH INF BTN
	(	FT. SILL OK 73503 /AFA6XX OK
	(	TO MR AND MRS JOSEPH SMITH
	(	1512 S. STATE
	(	CHICAGO IL 60691
	(	PH 302-921-0078
Prefix	(	GR 16
		BT
Text	(	ENJOYING NEW ASSIGNMENT WILL WRITE
	(	LONG LETTER EXPLAINING NEW DUTIES

Ending (HOPE TO SEE YOU SOON BILL
(BT
(OP NOTE: DO NOT ATTEMPT DELIVERY BEFORE 5 PM
(CHICAGO TIME

CHAPTER 7

MESSAGE HANDLING

When sending or receiving messages, keep in mind that information to be written down and prowords are the only things to be transmitted. If you will make some copies of the MARS MESSAGE FORM (Attachment 3) and keep them at your operating position. It will make both sending and receiving traffic very simple. The prowords are designed to alert the receiving station as to what will follow. In most cases prowords are not written down.

Before sending messages, you must become familiar with the prowords and know how they are used in message transmission (Attachment 2). As you monitor the traffic nets it will become evident that operators who use the prowords as they are intended are those who avoid making up their own non-MARS prowords. They are also the ones who avoid making extra comments during message transmission. You will probably notice that these well trained members are the ones who get their traffic on the way with the least difficulty. Unfortunately, you will occasionally hear supposedly trained MARS operators using other than the prescribed procedure, but these are the exception.

SPEAK SLOWLY AND DISTINCTLY. We pride ourselves in the ability to move traffic through the system accurately and quickly. Speed however, is secondary to accuracy. The few seconds gained by speaking too fast are frequently lost when the receiving station is forced to ask for fills. When sending traffic say words no faster than you can easily write them.

Never say "ROGER" for a message or a fill unless you are certain that you have received it correctly. The proword "SAY AGAIN" is the only way to ask for fills. Do not hesitate to use "SAY AGAIN" for any part of a message that you question. "SAY AGAIN" is used with "ALL AFTER", "ALL BEFORE", "WORD AFTER" and "WORD BEFORE". Requests for fills may use combinations of these to clarify your request.

e.g. "SAY AGAIN ALL AFTER" Birthday and "BEFORE" New York.

Never say "ROGER" for a message if the number of words or groups in the text do not agree with the number in the GROUP COUNT. Our system makes it quite easy for a receiving station to confirm all the necessary information while still in contact with the sending station. Corrections are more difficult to obtain after contact has been terminated. If a "ROGER" has been received for a message and an error is discovered, originate another formal message, stating the mistake and its correction. This is the way to correct the mistake. In the same manner, if a cancellation of a message is required, a new message stating cancellation is the correct method to follow.

USE OF COMMON PROWORDS

I SPELL

Use the proword "I SPELL" for all proper names, unusual words, words that sound like other words but are spelled differently, plural or past tense words. i.e. Words ending with "s" or "ed.", all abbreviations, all initials and some acronyms. Sometimes poor propagation dictates the practice of spelling every word. This will be a judgment call by the sending operator who will always consider the need for accuracy even though this will slow the speed of transmission. The technique for using "I SPELL" is to pronounce the

word (if pronounceable), then say "I SPELL", spell the word phonetically, then pronounce the word again (if pronounceable).

e.g. JIM, I SPELL, JULIET INDIA MIKE, JIM.

When spelling two or more words in sequence always treat each word individually, e.g.

TOM. I SPELL, TANGO OSCAR MIKE, TOM, SMITH, I SPELL, SIERRA MIKE
INDIA TANGO HOTEL, SMITH

Some additional examples:

MR. AND MRS (You would send) I SPELL MIKE ROMEO AND I SPELL MIKE ROMEO
SIERRA

MARS (You would send) I SPELL MIKE ALPHA ROMEO SIERRA

J. P. MORGAN (You would send) I SPELL JULIET I SPELL PAPA MORGAN I
SPELL MIKE OSCAR ROMEO GOLF ALPHA NOVEMBER
MORGAN.

ACP (You would send) I SPELL ALPHA CHARLIE PAPA

FIGURES

The proword FIGURES precedes all numerals (with some exceptions). Numerals are always expressed in single digits. e.g. FIGURES ONE SEVEN, not Figures Seventeen. You would write down the numerals "17" and count it as one group. If a number is to be sent as a word like Seventeen, it would be spelled phonetically to insure that no misunderstanding will result. The exceptions all appear in the message heading. The message number is preceded by the proword NUMBER not Figures. The DATE/TIME Group is preceded by the proword TIME, not Figures and the Group Count is preceded by the proword GROUPS, not Figures. The proword FIGURES is never used in conjunction with those three prowords, (NUMBER, TIME and GROUPS).

LETTERS AND FIGURES MIXED

If letters and figures appear together in the same group, you use the proword that reflects the first element of the group. If it a numeral then use FIGURES even though there are letters in the group. If the first element is a letter then use I SPELL. e.g.

If it is A1C (send) I SPELL ALPHA ONE CHARLIE

If it is 1st (send) FIGURE ONE SIERRA TANGO

CAUTION

Mixed groups can be sent different ways. If sent incorrectly in the text of a message, it will affect the group count. If a proword appears between the figures and the letter it will be counted as another group. e.g. If 09I is sent FIGURES ZERO NINER INDIA, it is correctly sent as one group but If it is sent as FIGURES ZERO NINER I SPELL INDIA a trained operator would count it as two groups because of the extra proword.

The other prowords can be found in Attachment 2 and further discussion of other prowords may be covered on the training nets.

LETTERING THE TEXT

If you are receiving a message and the GROUP COUNT does not agree with the actual number of words that you have copied, you may ask the sending station to "LETTER THE TEXT". The sender will respond by saying phonetically, the first letter or numeral of each group in the text. When you determine where the error occurred, you will then ask for fills using the "SAY AGAIN" procedure mentioned above.

TRANSMISSION INSTRUCTIONS

There are several procedures like READBACK, RELAY, RELAY TO and VERIFY which are used occasionally. You should make the effort to understand them in the event of necessity.

READBACK is used in the beginning procedure and thus may be added by any sending operator who may wish to hear the message read back to insure accuracy. Once the message is correctly read back to the sender, no "ROGER" is necessary. The sender upon hearing the message read back correctly responds with, "CORRECT OUT".

RELAY is an understood instruction and is usually not stated. All messages going through one or more intermediate stations is a RELAY. The prosign RR is sometimes seen on data nets and indicates RELAY ROUTINE.

RELAY TO is followed by a call sign or call signs and gives a specific order to the receiving station to relay to a specific station.

VERIFY is used by the addressee to Verify the content and accuracy of a message received. The addressee will originate a "Verify" message using the DTG and Station of Origin for identification. The originator will send the identical message again for verification.

ORIGINATING MESSAGES

For each message introduced into the MARS system there will be an originator and an originating station. They might be one and the same but in case of Health/Moral and Welfare messages they often are not. The originator is the actual sender of the message whose name appears in the FROM line of the message. The Originating Station is the MARS station who first introduced the message into the AF MARS system. The originating station is responsible for putting the message into the proper format and is responsible for abiding by the restrictions placed on the origination of MARS Messages. i.e. No original death notices, no coded or encrypted messages, no foreign language texts, no messages which contain obvious false or misleading information and no messages which are of a commercial nature. The originating MARS operator will sometimes make some judgment calls when confronted by some of these restrictions. Once a message is introduced into the system, no station may refuse the traffic on the basis of the above restrictions. If you receive a message that you believe should not have gotten into the system, do not deliver it but turn it over the HQ USAF MARS and state your reason for non-delivery. In the case of an original death notice Headquarters would probably turn it over to proper channels. i.e. Red Cross—Clergyman etc.

ARRL NUMBERED RADIOGRAMS

The American Radio Relay League provides a list of pre-written texts to fit many occasions, including emergencies. USAF MARS encourages the use of these “canned” messages even in messages that are not to be refiled. In the text of your MARS message, use ARL and the number spelled out. (NOT figures). e.g. ARL FIFTY FOUR sent as three groups. In delivery to a third party, that must be converted back to plain language. In this case (Many thanks for your good wishes.) See Attachment 4 for a list of ARRL Numbered Messages.

ASSIGNING PRECEDENCE

There are five levels of precedence available, MARSGRAM, ROUTINE, PRIORITY, IMMEDIATE and FLASH. Affiliate MARS members will generally not originate IMMEDIATE or FLASH. (IMMEDIATE may be used for Actual Event EEI reports); however, affiliates may relay and/or deliver these messages. Most messages originated by affiliates will be ROUTINE with PRIORITY being reserved for messages with a definite time factor. e.g. A flight arrival or a deadline to be met. PRIORITY does not mean that the text of a message is more important than ROUTINE but only that this message should be handled ahead of Routine because of the time factor.

PUNCTUATION

Generally, punctuation will not be used in the text of a MARS message. If you absolutely need to use punctuation to clarify the meaning of a text, then use only these approved abbreviations and count each one as a group and include it in the GROUP COUNT. Here are a few of the most common punctuations.

Period	PD	Sent as	I SPELL PAPA DELTA
Comma	CMM	Sent as	I SPELL CHARLIE MIKE MIKE
Colon	CLN	Sent as	I SPELL CHARLIE LIMA NOVEMBER
Dash	DASH	Sent as	I SPELL DELTA ALPHA SIERRA HOTEL

Some confusion results in the distinction between Hyphen and DASH. If DASH is used, it is spelled out and counted as a group, making it necessary to count what came before and after as separate groups. If hyphen is used, it is simply said as part of a group and allows the hyphenated word to be counted as one group. e.g. R-390 is sent as I SPELL ROMEO HYPHEN THREE NINER ZERO and is counted as one group.

PASSING TRAFFIC

The NCS will direct stations to pass traffic based on the precedence of each message and the availability of addressee(s) or another station to relay that traffic. Higher precedence traffic will normally be passed before lower precedence traffic unless stations are not available to handle the higher precedence traffic. NCS will then direct the holding station on how to proceed.

e.g. AFA1AA THIS IS AFN3TD, CALL AFA7BB PASS ONE PRIORITY KANSAS OUT

Note that since the transmission from AFN3TD ends with the proward OUT, AFA1AA needs make no response to AFN3TD.

Having heard the directions of the NCS, the sending station calls the receiving station.

e.g. AFA7BB THIS IS AFA1AA, ONE PRIORITY OVER

Assuming AFA2BB copies AFA1AA well, he sends

e.g. AFA1AA THIS IS AFA7BB, OVER

If AFA7BB does not copy well he must notify AFA1AA of the problem using correct radio check prowords

e.g. AFA1AA THIS IS AFA7BB, WEAK READABLE, OVER

Or

AFA1AA THIS IS AFA7BB, UNREADABLE, OVER

Once communications has been established between the two stations AFA1AA proceeds to pass the traffic.

e.g. THIS IS AFA1AA MESSAGE, (continue with the message header and text, pausing approximately every 20 seconds to allow for a station with higher precedence traffic to break in.)

AFA1AA ends his/her transmission with the proword OVER (If there are additional messages to send to this station, with the proword MORE TO FOLLOW, OVER.).

Assuming AFA7BB copied the message completely and does not need repetitions he sends

THIS IS AFA7BB, ROGER OUT

Or, to accept another message

THIS IS AFA7BB, ROGER OVER

If AFA7BB did not copy the message completely he/she will ask for repeats using the proword SAY AGAIN and ALL BEFORE, ALL AFTER, etc. or other identifiers within the message:

e.g. THIS IS AFA7BB, SAY AGAIN ALL AFTER TO AND BEFORE BREAK, OVER

DELIVERING MESSAGES

MARS messages are relayed through the system with the intention of getting them close enough to their destination for a local telephone call. Since this is not always possible, a few guidelines for delivery should be mentioned. Generally, if you are the closest station to the destination, you are expected to accept traffic. Members are never asked to have "out of pocket" expense for delivery. i.e. Using your own postage or paying for long distance telephone. However if you feel generous, you may deliver this way, but DELIVERY BY COLLECT TELEPHONE CALL IS NOT ALLOWED.

When messages cannot be delivered in the Air Force channels, refiling is encouraged. The Amateur Band NTS and the ARMY MARS or NAVY/MarineCorps MARS nets provide channels for refiling.

SERVICE MESSAGES

If you receive a message and cannot deliver it for any reason, ie.(Addressee moved and left no forwarding address, incomplete or wrong address, party unknown etc.) you must originate a "SERVICE" message back to the originating station. In the text of your service message refer to the DATE/TIME Group of the original message and state briefly your reason for non-delivery. Note that the DATE/TIME group is the only reference to use. Do not use the message number, it changes on each relay.

In practice you will see the group count eliminated and the word SERVICE or the initials SVC in place of a number. While this practice is in common usage it is not the most correct method. Previous training material has always advised to always count groups and use the word Service as the first word of the text to indicate the nature of the message. This is one of several practices where prescribed procedure has been changed by certain operators and then the entire system slips into a practice which may be in error.

REFILE (MARS to Amateur)

Here are the steps to follow when you find that you must refile a message into the NTS (National Traffic System) on the amateur band. It will help if you are familiar with the amateur message format.

1. The message number may change or stay the same.
2. The precedence will probably stay the same.
NOTE: Precedence for Amateur messages are Emergency, Priority, Welfare and Routine.
3. Put your amateur call sign as the station of origin.
4. The check number will be the MARS group count less any signature.
(In the amateur format the signature appears outside the text)
5. Place of Origin is City, State or Country via MARS
6. Time filed is the hours and minutes only from the MARS message
7. Date is Month Day and Year.
8. The address is the TO: address from the MARS message. (There's no provision for a FROM address)
9. The prosign BT separates the Text from the heading.
10. The Text will be the same except for any signature. ie. "Signed John", "Love Bill" etc. and these will follow the text after the second BT.
11. Since there is no provision for a From address in the amateur message, it is recommended that the from address from the MARS message be added with the signature as an ending since information is already available.

The following is a MARS message and then below that is the same message as refiled into the Amateur Band NTS.

```
DE AFA3BB NR 1
Routine 041930Z JUNE 2008
FROM SGT WILLIAM SMITH
      4TH INF BTN
      FT SILL OK 73530
TO MR AND MRS JOSEPH SMITH
  11515 STATE
  CHICAGO IL 60691
  302-921-0078
GR 16
BT
ENJOYING NEW ASSIGNMENT WILL WRITE
LONG LETTER EXPLAINING NEW DUTIES
HOPE TO SEE YOU SOON BILL
BT
OVER
```

Same message as filed into the NTS (Amateur)

```
NUMBER 1 ROUTINE KOUER CHECK 15 OKLAHOMA VIA MARS TIME 1930Z 4
June 08
TO: MR AND MRS JOSEPH SMITH
     11512 STATE
     CHICAGO, IL 60691
```

302-912-0078

BT

EMJOYING NEW ASSIGNMENT X WILL WRITE LONG LETTER EXPLAINING NEW
DUTIES X HOPE TO SEE YOU SOON BT SIGNED BILL

Optional: SGT WILLIAM SMITH
4th INF BTN
FT SILL OK 73505

NOTE: The ARRL Amateur system uses an XRAY in the text for all punctuation. It is not counted in the check or group count.

REFILE (Amateur to MARS)

Since the MARS message format is really more precise and you are trained in drafting MARS messages, this should be easier than the above procedure. Here are a few important things you should ask the sending station if you are asked to take traffic from the Amateur band and refile it into MARS: Is there a complete FROM Address, with telephone number? If the message cannot be delivered will you be able to reach the sender for notification? Is the text a subject that is acceptable on the MARS circuits? (See page 7-3 "Originating Messages").

1. Re-number to fit your MARS sequence
2. Assign a proper MARS precedence.
3. New date/time group should reflect the Time originated into MARS
4. Complete From and To Address.
5. Move any signature up into the Text and eliminate any "XRAYS" from the Amateur message to arrive at an actual MARS Group Count and TEXT.

If the Amateur message has an HX instruction (see Attachment 4 for the meaning of these codes), these instructions can be written out in the ending of your MARS message. In the MARS Heading there is no provision for HX instructions. If you receive a message which uses one, put it in plain language as an operators note at the end of your MARS message. Make certain if you accept an amateur message with HX instructions that the sender knows that MARS will not allow a collect call for delivery.

CHAPTER 8

ESSENTIAL ELEMENTS OF INFORMATION (EEI)

HOW TO DRAFT AND SEND AND EEI MESSAGE

Have on hand, a copy of **MESSAGE FORM for EEI REPORTS** (see page 8-4) and the **ESSENTIAL ELEMENTS of INFORMATION (EEI) Event Identifiers** (see page 8-3) and use these as guides when drafting the EEI message.

When drafting an EEI message for voice transmission put a regular MARS heading on it. E.g.

Number

Precedence, Date/Time Group

FROM (your Name, Station and State)

TO AAN3EEI VA (See note)

INFO AFD4EC SC

Your Region or Area Emergency Coordinator

Your SMD

Other INFO Addressees

Note: Actual EEI's are addressed to AAN3EEI VA; Exercise EEI's are addressed to AFN2EC NY.

Use the following format for your text....

BT

REF: ACTUAL EVENT or MARS EXERCISE

SUBJ: EEI REPORT

1. REF. EVENT IDENTIFIER: (Use applicable event identifier from page 8-3 or plain language if not on Identifier List)

A. INCIDENT LOCATION TIME: (Specify Town, City, County or State-wide area)

B. EMERGENCY MEDICAL: (Operational, Damaged, Destroyed, or Field Facilities available, etc.)

C. LOCAL TRANSPORTATION: (Indicate whether roads, bridges, local airports, railroads are affected and status – open, restricted, closed, damaged, destroyed. Provide enough information to disaster relief officials to aid in deciding how to get assistance to the affected area.)

D. GENERAL DAMAGE DESCRIPTION: (General description of damage or impact on Major structures such as Government buildings, schools, residences, commercial properties, public facilities; Fire stations, etc. Include location of shelters if applicable.)

E. UTILITY STATUS: (Gas, Water, Commercial Power, Sanitation Systems – Operational, Damaged, Destroyed, Needed.)

F. COMMUNICATIONS STATUS: (Telephone, Radio, Cellular Phone – Operational, Damaged, Unavailable)

G. SOURCE OF INFO: (Indicate Source of Information if different from originator of the message.

Include MARS Call sign, Name of Official and Agency, Radio/TV Call sign or Network as applicable.)

H. REMARKS: (Include comments about expected changes in status of any of the above items such as power companies expect power to be cut for (specify estimated time). If applicable, include expected time of next report.)

ACTUAL EVENT or MARS EXERCISE (Same as REF line.)

BT

You can take this message to TRANSCON Voice net or you can send it to a Digital Representative on your Area voice net who can relay it to one of the digital systems. Keep your descriptions brief and use NA if a category is “Not applicable” or “Not Affected”. Page 8-5 demonstrates an EXERCISE Messages (for drill purposes).

If you have occasion to report an actual event use the same format with the following exceptions: Replace the words “MARS EXERCISE” with “INCIDENT NOTIFICATION” at both places in the Text. An actual event message must be sent by the most expedient method available. Email is allowed for actual events ONLY. When sending by email, use the addresses: aan3eei@winlink.org and use an email subject line of //MARS O/INCIDENT NOTIFICATION.

ESSENTIAL ELEMENTS of INFORMATION (EEI) Event Identifiers

(Reference: U. S. Army MARS National Emergency OPLAN 4-02, Dated 03 April 2002. Applicable to Air Force and Navy-Marine Corps MARS services).

EVENT	IDENTIFIER:
AIR CRASH.	FALLEN STAR
AIRBORNE POISON GAS	POISON AIR
BIOLOGICAL EVENT	BAD BUG
BOMBING INCIDENT	LOUD BANG
BRIDGE DAMAGE/LOSS (MAJOR)	LOST SUPPORT
CHEMICAL SPILL	POISONED GROUND
CIVIL UNREST/RIOT	BAD MAGIC
DAMAGING HAIL	FALLING ICE
EARTHQUAKE	ROLLING THUNDER
FLOOD	TALL WATER
FOREST/GROUND FIRE	SCORCHED GROUND
GAS LEAK/EXPLOSION (MAJOR)	HOT AIR
HEAVY WINDS (ONLY).	MIGHTY WIND
HURRICANE	HOWLING WIND
ICY ROADS/INTERSTATE/FREEWAYS	BLACK ICE
INTERSTATE BLOCKED/DAMAGED (MAJOR)	BLOCKED LANE
MAJOR COMMUNICATIONS LINK DOWN	LOST COMM
NUCLEAR	NUCLEAR GRAYSTONE
OIL SPILL/WATER	DARK WATER
POWER OUTAGE (MAJOR)	DARK DAY
SEARCH/RESCUE	SECURE HAVEN
SEISMIC SEA WAVE	TSUNAMI
SHIP WRECK/INCIDENT	DEEP SEA
TERRORIST THREAT	HIDDEN SHADOW
TORNADO	VIOLENT TWISTER
TRAIN WRECK/DERAILMENT	BROKEN TRACKS
VOLCANO	BRAZEN BRIMSTONE
WATER DAM BREAK/DAMAGED	FAST WATER
WINTER SNOW STORMS	WHITE BLANKET
COMMUNICATIONS SUPPORT ROLE(S)	
IDENTIFIERS:	EVENT: IDENTIFIER:
FEMA SUPPORT	FEDERAL RESPONSE
JCS SUPPORT	JOINT LIONS
NATIONAL GUARD/RESERVE SUPPORT	CIVIL COVER
NCS SUPPORT	TOP COVER
NDMS SUPPORT	MEDICAL LINK
SHARES SUPPORT	COMMON FORTUNE

MESSAGE FORM for EEI REPORTS (Voice)

THIS IS _____ NUMBER _____
ROUTINE or (IMMEDIATE) TIME _____ ZULU _____
(6 digit Date time) (Month) (Year)
FROM _____ / CALL SIGN _____
(Name) (call sign) (State)

TO CALL SIGN AAN3EEI VA or AFN2EC NY

Note: Actual EEI's are addressed to AAN3EEI VA; Exercise EEI's are addressed to AFN2EC NY.

INFO _____

BREAK
REF. ACTUAL EVENT or MARS EXERCISE
(Say one or the other, not both)
SUBJ. EEI REPORT

FIGURE 1 REF. EVENT IDENTIFIER _____
(Event Identifier from List)

I SPELL ALPHA INCIDENT LOCATION TIME _____
(Area impacted and time of incident)

I SPELL BRAVO EMERGENCY MEDICAL _____
(Status of Medical Facilities)

I SPELL CHARLIE LOCAL TRANSPORTATION _____
(Status of Transportation Facilities)

I SPELL DELTA GENERAL DAMAGE DESCRIPTION _____
(Exact location and Character of Damage)

I SPELL ECHO.UTILITY STATUS _____
(Status of local Utilities)

I SPELL FOXTROT COMMUNICATIONS STATUS _____
(Status of Communication Facilities)

I SPELL GOLF SOURCE OF INFO _____
Source of Information)

I SPELL HOTEL REMARKS _____
(Detailed description and estimate of resumption of normalcy)

ACTUAL EVENT or MARS EXERCISE
(Say one or the other, not both)

BREAK
OVER

SAMPLE EEI MESSAGE (EXERCISE)

DE AFA3DK NR 1
R 101730Z JAN 2007
FM DAN M. KIRBY/AFA7DK MO
TO: AFN2EC NY
INFO: AFD4EC SC
AFE5EC WI
AFF7MO MO
BT
REF. MARS EXERCISE
SUBJ. EEI REPORT
1. REF. EVENT IDENTIFIER: TALL WATER
A. INCIDENT LOCATION TIME: CEDAR COUNTY MISSOURI
B. EMERGENCY MEDICAL: NOT AFFECTED
C. LOCAL TRANSPORTATION: FLOODING ON MANY SECONDARY ROADS.
D. GENERAL DAMAGE DESCRIPTION: FLOODING OF LOW AREAS.
E. UTILITY STATUS: NOT AFFECTED
F. COMMUNICATIONS STATUS: NOT AFFECTED
G. SOURCE OF INFO: CEDAR COUNTY SHERIFF
H. remarks: RAIN EXPECTED FOR SEVERAL HOURS. ROADS EXPECTED TO GET WORSE.
POTENTIAL FOR CLOSING OF MANY SECONDARY ROADS LATER TODAY.
MARS EXERCISE
BT
NNNN

NOTE: Precedence for Actual EEI will be **Immediate**. Precedence for Exercise EEI will be **Routine**.

MARS Exercise EEI Reports should be sent via digital if available to AFN2EC NY. If digital is not available the report may be sent by voice to a digital capable station who will place it into the digital system.

DO NOT SEND EXERCISE MESSAGES VIA EMAIL UNLESS YOU ARE INSTRUCTED TO DO SO BY THE CHIEF USAF MARS OR THE NATIONAL EMERGENCY COORDINATOR, AFN2EC.

SAMPLE EEI MESSAGE (ACTUAL EVENT)

DE AFA3DK NR 1
O 101730Z JAN 2007
FM DAN M. KIRBY/AFA7DK MO
TO: AAN3EEI VA (**See Notes:**)
INFO: ZEN AFN2EC NY
ZEN AFD4EC SC
ZEN AFN5NC NE
ZEN AFE5EC WI
ZEN AFF3XX SMD
ZEN AFA3XX SEC

BT
REF. ACTUAL EVENT
SUBJ. EEI REPORT
1. REF EVENT IDENTIFIER: TALL WATER
A. INCIDENT LOCATION TIME: CEDAR COUNTY MISSOURI
B. EMERGENCY MEDICAL: NOT AFFECTED
C. LOCAL TRANSPORTATION: FLOODING ON MANY SECONDARY ROADS.
D. GENERAL DAMAGE DESCRIPTION: HEAVY RAINS HAVE CAUSED FLOODING OF LOW AREAS
E. UTILITY STATUS: NOT AFFECTED
F. COMMUNICATION STATUS: NOT AFFECTED
G. SOURCE OF INFO: CEDAR COUNTY SHERIFF
H. REMARKS: RAIN EXPECTED FOR SEVERAL HOURS. ROADS EXPECTED TO GET WORSE.
POTENTIAL FOR CLOSING OF MANY SECONDARY ROADS LATER TODAY.
ACTUAL EVENT
BT
NNNN

NOTES:

Precedence for Actual EEI will be **Immediate**. Precedence for Exercise EEI will be **Routine**.

Actual EEI Reports should be sent via E-MAIL if available to the addresses as follows: E-MAIL: **aan3eei@winlink.org** (must be entered as all lower case characters). The E-MAIL subject must be **//MARS O/INCIDENT NOTIFICATION**. (Note: If this is not the subject line of the email it may be rejected.)

The originating station that sends an Actual EEI Report by E-Mail is responsible for sending the info copies by CC's or other means (*i.e. radio*)

Actual EEI reports sent by digital mode (*in the event E-MAIL is unavailable*) will be sent via the **Winlink 2000 (WL2K or AirMail)** system to: **aan3eei@winlink.org**

DO NOT SEND EXERCISE MESSAGES VIA EMAIL UNLESS YOU ARE INSTRUCTED TO DO SO BY THE CHIEF USAF MARS OR THE NATIONAL EMERGENCY COORDINATOR, AFN2EC.

EXAMPLE DIGITAL EEI EXERCISE MESSAGE

Below is an example of an EXERCISE EEI message as it would be formatted for transmission by digital means:

DE AFA5JR NR 1
R 071410Z SEP 2007
FM: JERRY RYAN / AFA5JR WI
TO: AFN2EC NY
INFO: AFD4EC SC
 AFN3NC NE
 AFE5EC WI
 AFF3WI WI

BT

REF: MARS EXERCISE

SUBJ: EEI REPORT

1. REF: EVENT IDENTIFIER: LOST SUPPORT

A. INCIDENT LOCATION TIME: POLK COUNTY WI AND WASHINGTON AND CHISAGO COUNTIES MN

B. EMERGENCY MEDICAL: OPERATIONAL

C. LOCAL TRANSPORTATION: US HIGHWAY 8 BRIDGE BETWEEN ST CROIX FALLS WI AND TAYLORS FALLS MN CLOSED

D. GENERAL DAMAGE DESCRIPTION: STRUCTURAL DAMAGE TO US HIGHWAY 8 BRIDGE

E. UTILITY STATUS: NOT AFFECTED

F. COMMUNICATIONS STATUS: NOT AFFECTED

G. SOURCE OF INFO: REPORTED BY LOCAL RADIO STATION WPCA

H. REMARKS: TANKER TRUCK ACCIDENT ON BRIDGE CAUSED EXTENSIVE DAMAGE TO BRIDGE CAUSING BRIDGE CLOSURE. TRAFFIC REROUTED TO OTHER ROUTES. NO ESTIMATED TIME TO REPAIR.

MARS EXERCISE

BT

NNNN

CHAPTER 9

MISCELLANEOUS INFORMATION

LOGS

You are required to keep a log of all of your MARS activities. Any format of your choosing is acceptable if it shows the times that you enter nets, closing times, traffic activity and any other formal MARS activity. Since the station log is a legal document, entries should be made in ink with no erasures. Errors should be marked out with a single line and the corrected notation initialed by the operator on duty. While many affiliates keep their logs indefinitely, logs must be retained for at least one year.

TIME KEEPING

All official time is kept in UTC (Coordinated Universal Time) on the basis of the 24 hour clock. Formerly this was called GMT (Greenwich Mean Time) and is sometimes referred to as military time. Since most of our HF nets are scheduled for convenient evening hours, we will occasionally refer to "Local Time" but this must be converted to UTC for official purposes such as logs, Message DTG. etc.

When expressing time in UTC the figures are followed by the letter "ZULU" to indicate the system being used.

BROADCASTS and BULLETINS

Broadcasts are released from HQ MARS and other selected officials on an as needed basis. The information in these broadcasts is addressed to all MARS members. Some of the information is merely informative but much of it is directive. All members are required to have current knowledge of the contents of these broadcasts. The broadcasts and bulletins are read a number of times on various nets and posted on various bulletin boards and web pages.

FREQUENCY TOLERANCE

The frequency tolerance for all HF operation is plus or minus 20 Hz. The NCS is responsible for ensuring the net is operating within prescribed tolerance and for ensuring all members on the net are within tolerance.

SURPLUS EQUIPMENT

New members become eligible to request surplus equipment 6 months after completing training if at least minimum participation requirements have been met. Information about availability and procedure for requesting surplus equipment is available through your SMD. The state administrative net is the ideal place to get this information.

RETURN ADDRESS FOR MARS CORRESPONDENCE

Mailed messages and MARS correspondence should carry the return address of HQ MARS:

HQ AFCA/ESLM (MARS) (Your Call sign and State.)
203 W LOSEY ST. ROOM 3100
SCOTT AFB IL 62225-5222

NOTE: The office symbol changes from time to time. Watch for announcements in the MARS BROADCASTS.

DRILL MESSAGES

The "Drill" Messages that you will send to complete training are simply messages in plaindress format. These messages can be an actual message to another MARS member or a third party. Actual messages will be relayed on through the system for delivery. In most cases, the training message will be a factitious message, in which case the word "DRILL" must appear as the FIRST and LAST word of the text. Both words "Drill" are counted in the Group Count. The purpose of the drill message is to demonstrate your ability to send messages in the MARS format, using all the correct procedures and prowords. When sending Drill message use complete addresses and avoid the abbreviated format.

After sending the message on the air, your trainer may make some suggestions and offer constructive help.

TRAINING FINAL EXAM

After satisfactorily sending the training drill messages you will receive a 50 question final exam. A score of 85% or better is required to complete training. The final exam is an open book test and is based on material found in this guide and discussed on the training nets. The final exam should be completed within 10 days.

PARTICIPATION TIME

Your time spent on the MARS Networks will be recorded and reported by various Net Managers of the respective nets. On some nets the actual time you are checked in is reported and on others, often you will be given a full hour for any time spent on certain administrative nets. Miscellaneous time may be reported to your SMD for time spent on MARS projects or MARS business such as attendance at MARS conferences, preparing net reports, repeater maintenance, MARS technical projects etc.

CALL SIGN CHANGE

When you have met all of the training requirements, the Region or Area Training Director will notify your Area MARS Director, who will send you an AF Form 3661 giving you a permanent assignment and authorizing the change in your call sign by dropping the /T suffix. Sometime later you will receive a MARS license and ID card (AF Form 3666) from USAF MARS Headquarters reflecting your modified call sign.

CHAIN OF COMMAND

The primary contact point for questions, comments or other issues relating to USAF MARS is your State MARS Director (SMD). If your SMD is unable to address a particular issue, your request will be forwarded to the appropriate Region Official or the Region MARS Director (RMD). If the RMD is unable to resolve the issue, it will be forwarded to the appropriate Area Official or the Area MARS Director (AMD). If the AMD still is unable to resolve the issue, it will be forwarded to HQ USAF MARS for final resolution.

It is imperative that the chain of command be strictly adhered to without deviation. Most USAF MARS officials are volunteers and already dedicate a significant amount of time to the USAF MARS program.

Failure to follow the chain of command can greatly increase the work load on these individuals and reflects poorly on the overall MARS program.

FREQUENCY DESIGNATORS

USAF MARS frequencies are referenced using a “frequency designator” rather than by the specific numerical frequency. These two or three character frequency designators allow USAF MARS operators to indicate specific frequencies without divulging the exact numerical frequency to any third party that might be monitoring the radio transmissions. Frequency Designators are always given in phonetics e.g. FREQUENCY ROMEO HOTEL

In short, never give numerical MARS frequencies over the air.

The frequency designators and exact numerical frequencies are contained in the “USAF MARS Frequency Matrix” available through your State MARS Director or your Training Director

Section II

Voice Net Control Training Guide

Compiled by Jerry Ryan – AFN5TD/AFA5JR
National Training Manager

Authorized by Headquarters AFCA
For Air Force Training

Revised 21 April 2009
Supersedes all previous editions

Preface

To all MARS members:

Every USAF MARS member who has completed training is assumed to be capable of being a Net Control Station (NCS) whether or not they have completed a formal NCS training course. It's actually not that difficult to be an NCS – after you conquer the nervousness, you probably may find it more enjoyable to be an NCS than to sit and listen to static for the entire scheduled net time.

There are ample opportunities to practice your skills as an NCS. You do not have to commit to being an NCS every week.

Occasionally, the scheduled NCS will have conflicts that prevent him/her from being present for a scheduled net. Why not volunteer to pick up the net on those occasions?

The scheduled NCS for a multi-hour net might appreciate a break from the NCS duties. Why not offer to relieve the NCS – even if it is only for a fairly short period of time?

The best way to hone your NCS skills is through practice. As your skills grow you may find that you really enjoy being an NCS. When that happens, contact the Net Manager and discuss the possibility of becoming the scheduled NCS for a specific net.

LISTEN, LISTEN, LEARN IS GOOD ADVICE!

On the nets you will pick up useful information and observe procedures and duties of the NCS, but be careful that this information and procedures are correct. When in doubt, ask someone like your Training Director, State MARS Director (SMD) or a Area/Region official. Remember, we are all here to assist you in any way we can.

“There is no such thing as a dumb question!” The only dumb question is one that is not asked.

FROM YOUR DIRECTOR AND TRAINING DIRECTOR

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INTRODUCTION

On 22 Nov 2007 the Chiefs of Air Force, Army and Navy-Marine Corps MARS promulgated a document entitled *Standard Operating Procedure for Calling and Operating a Voice Net* (generally referred to as the “*Voice SOP*”) setting forth the procedures that would be required to be used on MARS nets as of 01 Jan 2008. The *Voice SOP* supersedes the previous procedures for all Air Force, Army and Navy-Marine Corps MARS voice nets. A copy of the *Voice SOP* may be found in Attachment 6.

The purpose of the *Voice SOP* is to provide a set of standard procedures that will serve to encourage and support interoperability among the various MARS services. Having standardized procedures allows stations from one MARS service to participate in nets hosted by another MARS service without requiring additional training on the “unique” procedures of the host service. Such interoperability is not only desirable but may be crucial when fulfilling the role of providing emergency communications support.

It is assumed that every MARS member who has completed training is capable of performing the duties of the Net Control Station (NCS). You may choose to volunteer to perform the NCS function or you may be assigned, at any time, to perform the duties of NCS. Thus it is important that you are familiar with the procedures in the *Voice SOP*. This guide only summarizes the most common NCS functions. The *Voice SOP* details additional possible NCS actions such as imposing SILENCE, directing use of FULL and ABBREVIATED PROCEDURE, etc.

To minimize confusion, this manual will use the same terms and substitutions as in the *Voice SOP*:

1. A1B2 is a sample net designator
2. NCS is the net control station (this would be substituted with the net control’s actual call sign)
3. FRQ1 represents a frequency designator
4. AAA, BBB, CCC, etc represent stations on the net. (**Note:** these are **not** abbreviated call signs. Abbreviated call signs are not authorized on USAF MARS nets.).

GENERAL OPERATING PRINCIPLES

All USAF MARS are directed nets unless declared otherwise by the NCS. This means every station must have NCS permission to transmit.

Nets are under the direct and immediate control of the net control station (NCS). The NCS is responsible to maintain net discipline and to ensure that all stations are operating within prescribed frequency tolerance.

It is often expedient to have an Alternate Net Control station (ANCS) assigned in advance, or for NCS to designate an ANCS station at the start of the net. The NCS could suddenly, and without warning, be gone from the net.

Stations must first be checked into a net before they may conduct any business on the net.

Once checked in stations are expected to maintain constant watch on the net, be prepared to respond when called, and be prepared to receive traffic at any time. Stations are expected to remain for the duration of the net unless granted permission by NCS to close down sooner.

Superfluous wording must be eliminated from transmissions. Stations are expected to use prescribed procedures at all times. Transmissions shall be short and concise, consistent with clarity.

Stations will use only authorized prowords and in accordance with their proper meaning only.

Stations should not expect pleasantries or unnecessary explanations during a directed net. The use of personal names is not authorized while a net is in a formal status.

Record traffic must first be listed with the NCS, shall be passed to another station only at the direction of NCS, and only when the net is in directed net status.

PRIOR TO OPENING THE NET

Check In of ANCS

If ANCS(s) are assigned for the upcoming net, the NCS will call each in order to determine readability and traffic status: e.g.

BBB THIS IS AAA, RADIO CHECK, LIST YOUR TRAFFIC, OVER

BBB would respond to the Radio Check and traffic listing: e.g.

THIS IS BBB, LOUD AND CLEAR, NO TRAFFIC, OVER

And AAA will acknowledge: e.g.

THIS IS AAA, LOUD AND CLEAR, ROGER, OUT

And then proceed to call other assigned ANCS(s).

If no ANCS is assigned for the net or the NCS is unable to contact assigned ANCS(s), the NCS will appoint ANCS(s) after opening the net. See “**Appointing an ANCS**” on page 5.

OPENING A NET

Every net has a net designator as determined by type, administrative level, and location of the net. The net designator not only identifies a specific net, it also serves as a special case of collective call sign representing all stations checked into a net, or wishing to check in.

NCS will make sufficient call ups at the start of the net in an effort to capture all the stations wishing to check in. NCS then proceeds with handling listed traffic, then any other net business and comments between stations. Training should be conducted as required, or as directed by competent authority. Training will always be done with the net in directed net status.

Frequent call ups are important throughout the net.

At the designated time the Net Control Station (NCS) will call the net as follows:

Conditions good: NCS starts the net with a call up by transmitting:

A1B2, A1B2 THIS IS NCS OVER

Note: The net designator is stated twice only in the first call up. This call up serves multiple functions. It announces the net, puts the net in directed net mode, and authorizes stations to transmit for such purposes as checking in and listing traffic.

Conditions Poor: When conditions are poor NCS will transmit the call up using words twice, without use of the proword WORDS TWICE. e.g.
A1B2, A1B2 THIS IS NCS, NCS OVER

Subsequent call ups are made as follows:

Conditions good: A1B2 THIS IS NCS OVER

Conditions poor: A1B2, A1B2 THIS IS NCS, NCS OVER

Note: It is good practice to give the NCS call sign and net designator in full phonetics on all net calls.

Stations wishing to check in do so.

NCS must acknowledge all check ins. This should be done in the order stations checked in. NCS transmits:

AAA, BBB, EEE, CCC, GGG THIS IS NCS, ROGER, OUT

If NCS did not fully hear a station, example CCC, NCS withholds acknowledging that station, finishes the remainder of the acknowledgements, then transmits:

CCC THIS IS NCS, SAY AGAIN OVER

If NCS heard a station but did not hear the call sign, or only part of the call sign, NCS transmits an unknown station call up. Note that only stations who attempted check in, but were not acknowledged are authorized to transmit at this time. NCS transmits:

UNKNOWN STATION THIS IS NCS, OVER.

If necessary, NCS may call another station on the net to relay an unknown station's transmission.

If NCS hears no stations during a net call, he/she may transmit: e.g.

THIS IS NCS, NOTHING HEARD OUT

and continues conducting net operations.

Limiting Check-ins

It may be desirable on larger nets to limit check-ins by type or geographic area. This must be approved for each net or series of nets (e.g. all Region ECOM nets) by the respective director or Chief MARS (authority to approve may be delegated if authorized by the respective Chief MARS).

These check in limiters shall not be used except where a large number of check-ins is anticipated and their use serves to help reduce doubling, save air time, and minimize confusion. Their use, when authorized, is not mandatory, unless so prescribed by competent authority. They exist as a tool to aid NCS in maintaining net control and discipline. Only authorized phrases shall be used to modify the call up process.

Each subsequent call up may use a different limiter, such as calling for stations one state at a time. Use of a limiter does not require that NCS always use limiters on every call up. This should be based on a logical balance of the extra air time required versus the benefit of reducing problems.

The limiting call up would be:

A1B2, A1B2 THIS IS NCS, (insert phrase here) OVER

The following are authorized phrases to limit check-ins and would replace the "insert phrase here" in the above call up.

- STATIONS WITH RECORD TRAFFIC ONLY
- STATIONS WITH PRIORITY TRAFFIC ONLY (this would include any traffic of higher precedence. May be used in combination with a geographic area, example DADE COUNTY FLORIDA STATIONS WITH PRIORITY TRAFFIC ONLY)
- ALL NEW YORK ARMY MARS STAFF ONLY (substitute Navy or AF as appropriate. Replace "NEW YORK" with any logical MARS administrative or operational zone such as Region Five, or Central Area)
- ALL ALABAMA STATIONS (substitute ALABAMA with any generally understood geographic area including, but not limited to, state, county, borough, or city)
- ALL STAFF REGION ONE (this could be further limited by requesting only ECOM staff, only training staff, or any logical limitation of station type); or,
- by use of a collective call sign if that is most expedient.

FREE AND DIRECTED NET STATUS

All nets will always begin in directed net status. This means every station must have NCS permission to transmit. Record traffic may only be passed when the net is in directed net status.

After all traffic, training, and net business has been handled NCS may put the net into Free Net status if Free Net is authorized by transmitting e.g.

A1B2 THIS IS NCS THE NET IS FREE OUT

Free Net means stations may contact each other directly without prior permission of NCS. A station may exchange informal comments with another station with the following limitations:

- (1) All comments must, in some way, relate to MARS business or the mission of MARS;
- (2) Comments need to be brief, consistent with clarity.
- (3) Stations must pause between turnovers in transmission to allow for another station to break in.
- (4) NCS may interrupt an exchange at any time and stop the exchange by calling a directed net.

The NCS may return the net to directed status by transmitting: e.g.

A1B2 THIS IS NCS THE NET IS DIRECTED OUT

or by making a net call: e.g.

A1B2 THIS IS NCS OVER

ABBREVIATED CALL SIGNS

Abbreviated call signs are not authorized on USAF MARS nets.

ALTERNATE NET CONTROL STATION (ANCS)

It is often expedient to have an Alternate Net Control station (ANCS) assigned in advance, or for NCS to designate an ANCS station at the start of the net. The NCS could suddenly, and without warning, be gone from the net.

The primary duties of the ANCS are:

- Serve as a back up to the NCS by logging check ins
- Assume NCS duties if the NCS is gone from the net
- Other duties assigned by the NCS

Appointing an ANCS

An NCS may appoint any station checked into the net as an ANCS. Usually this appointment should be made fairly early in the net to maximize the availability of the ANCS. To appoint BBB, for example, as an ANCS the NCS would transmit: e.g.

BBB THIS IS NCS, ASSUME ALTERNATE NET CONTROL OVER

To which BBB would respond: e.g.

THIS IS BBB, WILCO OVER

And NCS will confirm with: e.g.

ROGER OUT

Note: The appointment as an ANCS is a directive of the NCS rather than a request. Stations refusing to accept appointment as an ANCS must provide justification why he/she can not accept the appointment.

CHANGING NET CONTROL STATION

Occasionally it may be necessary or desirable to transfer net control to another station. This could be for a brief period or for the duration of the net. Assuming CCC is NCS and wishes to transfer control to AAA:

AAA THIS IS CCC, ASSUME CONTROL, OVER

CCC THIS IS AAA, ROGER OUT.

AAA is now NCS. AAA will immediately make a call up

A1B2 THIS IS AAA, OVER

This notifies the net that AAA has assumed control, puts the net in directed status, and authorizes stations to check in or otherwise contact NCS.

Variations could include some instruction from NCS to AAA such as:

AAA THIS IS CCC, ASSUME CONTROL FOR 10 MINUTES, OVER, or

AAA THIS IS CCC, ASSUME CONTROL UNTIL (state a time), OVER

When CCC returns and wishes to resume control CCC will, at a call up or on a free net, transmit:

AAA THIS IS CCC I ASSUME CONTROL, OVER

At this point AAA will acknowledge CCC and notify CCC of any changes in net status, new traffic listings, traffic passed, and stations that checked in or closed down while AAA was net control. CCC will acknowledge this information then make a call up. (It is never acceptable for CCC to tell AAA, "I was monitoring the entire time and have all the information." This does not confirm to AAA that CCC in fact does have all the information.)

Loss of NCS

It may happen that NCS suddenly, and without warning, disappears from the net. This could be due to equipment failure, power outage, sudden change in propagation, or any number of reasons. If an ANCS has been assigned in advance and he or she suspects something has happened to NCS, that station will first attempt to contact NCS. If no contact is made ANCS will ASSUME CONTROL, make a call up, and proceed as outlined above. If no ANCS has been designated any station who hears the net well shall assume NCS duties.

PASSING TRAFFIC

When ready NCS will call stations to pass their traffic based on the precedence of each message and the availability of addressee(s) or another station to relay that traffic. NCS will then direct the holding station on how to proceed.

Example A:

AAA THIS IS NCS, CALL BBB PASS ONE PRIORITY SAA OUT
BBB THIS IS AAA, ONE PRIORITY OVER

Assuming BBB copies AAA well, he/she sends

AAA THIS IS BBB, OVER

THIS IS AAA MESSAGE, RELAY PRIORITY (continue with the message header and text, pausing approximately ever 20 seconds to allow for a station with higher precedence traffic to break in.)

AAA ends his/her transmission with

OVER

or in the case where there are additional messages to send to this station,

MORE TO FOLLOW, OVER

Assuming BBB copied the message completely and does not need repetitions he sends

THIS IS BBB, ROGER OUT

Or, to accept another message

THIS IS BBB, ROGER OVER

Example B:

If BBB does not copy well he must notify AAA of the problem using correct radio check prowords

AAA THIS IS BBB, WEAK READABLE, OVER

Or

AAA THIS IS BBB, UNREADABLE, OVER

BREAKING THE NET

A station may interrupt the current flow of communications on a net if he or she has a communication of higher precedence which must be conveyed as quickly as possible. Such communications includes:

- (a) record traffic of a higher precedence than the traffic being passed;
- (b) non-record traffic communication for one or more stations that is urgent, time sensitive, and may impact the safety of persons or property.

The station wishing to break the net should wait for the next natural pause in the communication currently taking place; preferably waiting for the end of that communication. The content of the breaking station's communication should be the determining factor for establishing urgency, not simply that the station has, for example, a PRIORITY precedence message and a ROUTINE message is currently being sent. Breaking the net is a rare event. Normally, waiting a minute or two is not going to make a difference. If the breaking station knows the current communication is lengthy or several messages are going to be sent then interrupting may be necessary.

EXAMPLE:

When a station has determined it is essential to break the net he or she shall wait for a pause in the current transmission. He or she will then transmit the precedence of his/her traffic three times, e.g.:

PRIORITY, PRIORITY, PRIORITY (pause) NCS, THIS IS AAA, OVER

(The pause is to see that the other station has heard and is not continuing his or her transmission.)

NCS will transmit:

AAA, THIS IS NCS, OVER

AAA will then list his or her traffic or reason for breaking the net.

If it is evident that NCS does not hear the breaking station any station on the net may relay by calling NCS and advising him or her of the breaking station. This should normally be one of the stations being interrupted. If NCS hears the breaking station, but it appears the station currently engaged in communications did not, NCS will acknowledge the breaking station by transmitting

AAA, THIS IS NCS, WAIT OUT

NCS will then take steps to regain control of the net.

NET CONTINUITY CHECK (Roll Call/Radio Check)

On most nets, with a duration of longer than one hour, the NCS may hold a Net Continuity Check. The purpose of the Net Continuity Check is to ascertain propagation conditions between the NCS and those stations checked into the net. This consists of a roll call of the stations checked in. Stations's response will be a Radio Check. (MARS term for signal report). The NCS will announce that a Roll Call will follow and then proceed calling each station by their call sign only. Stations called will answer with an abbreviated call and a Radio Check: e.g.

THIS IS AFA3AA LOUD AND CLEAR OVER

Other Radio Check reports are —

GOOD AND READABLE

WEAK BUT READABLE

WEAK BARELY READABLE

WEAK UNREADABLE

Note: Do not include phrases such as “I have you”, “You are”, “Your signal is”, etc.

Roll Calls are held at the discretion of the NCS but usually not more than once an hour. On traffic nets of two hour duration roll is called approximately 5 minutes into the second hour. If the NCS for a one hour net chooses to make a Roll Call, this Roll Call will usually be at the half-hour.

CLOSING DOWN THE NET

At the appointed time for a net to end, and NCS is satisfied that all traffic has been handled, NCS will close the net as follows: e.g.

A1B2 THIS IS NCS, CLOSE DOWN, OUT

It is imperative that NCS be aware whether a net is authorized to continue on past the designated end time. If it is not, NCS must arrange with stations holding traffic to dispose of that traffic on another net. This must be done well enough in advance of net end time to adequately take care of this business.

In some cases NCS may be authorized to close down a net before the designated end time. For example, B1C3 net is assigned a one hour slot, but is authorized to close down after 30 minutes of operation if there is no further traffic or business to handle.

Once the net is closed down no further transmissions are authorized.

REPORTING NET ACTIVITY

It is the duty of the NCS to report the activity of his/her net including:

- stations that checked into the net
- actual time each station participated in the net
- traffic handled on the net

The routing of net reports varies from USAF MARS area/region to area/region. Contact your Region or Area Records Manager for guidance as to format and routing.

ATTACHMENT 1

PHONETIC ALPHABET AND NUMERALS

The ITU Recommended Phonetics are the only ones recognized by AFMARS.

Capitalized portion of pronunciation is to be emphasized. Be natural; don't force the pronunciation

PHONETICS

	Pronounced
A	- ALPHA (AL-fah)
B	- BRAVO (BRAH-vo)
C	- CHARLIE (CHAR-Lee)
D	- DELTA (DELL-tah)
E	- ECHO (ECK-oh)
F	- FOXTROT (FOKS-trot)
G	- GOLF (GOLF)
H	- HOTEL (hoh-TELL)
I	- INDIA IN-dee-ah)
J	- JULIET (JEW-lee-ett)
K	- KILO (KEE-loh)
L	- LIMA (LEE-mah)
M	- MIKE (MIKE)
N	- NOVEMBER (no-VEM-ber)
O	- OSCAR (OSS-cah)
P	- PAPA (pa-PAH)
Q	- QUEBEC (kay-BECK)
R	- ROMEO (ROW-me-oh)
S	- SIERRA (see-AIR-rah)
T	- TANGO (TANG-go)
U	- UNIFORM (YOU-nee-form)
V	- VICTOR (VICK-tah)
W	- WHISKEY (WISS-key)
X	- X-RAY (ECKS-ray)
Y	- YANKEY (YANG-key)
Z	- ZULU (ZOO-loo)

NUMERALS

	Pronounced
1	- WUN
2	- TOO
3	- TREE
4	- FO-wer
5	- FIFE
6	- SIX
7	- SEV-en
8	- ATE
9	- NI-ner
0	- ZEE-row
100	- WUN ZEE-row ZEE-row
1000	- WUN ZEE-row ZEE-row ZEE-row

Note: MARS number phonetics contain no phrases such as "one thousand", "one hundred thousand" etc. ALL numbers are given figure by figure phonetically.

ATTACHMENT 2

AUTHORIZED PROWORDS

<u>PROWORD</u>	<u>EXPLANATION</u>
ADDRESS GROUP	The group that follows is an address.
ALL AFTER	The portion of the message that I have referenced is all that follows as indicated. (Usually followed by the proword SAY AGAIN).
ALL BEFORE.....	The portion of the message that I have referenced is all that that proceeds as indicated. (Usually followed by the proword SAY AGAIN).
BREAK	Indicates separation of text from other portions of the message.
CALL SIGN.....	The group that follows is a call sign
CORRECT	You are correct or what you have transmitted is correct.
CORRECTION	An error has been made in my (your) transmission. Correct transmission follows.
DISREGARD THIS	Disregard this transmission. This proword should never be used to cancel a receipted message
FIGURE(S)	The group (or groups) that follow is composed of numbers. NOTE: The group can also contain letters, but will use the proword FIGURES when the first character is a number.
FROM	Address or MARS callsign/w state of the originating station.
GROUPS	Followed by the number of groups in a message. This can be optional.
GROUPS NO COUNT	The groups in this message have not been counted.
INFO	The addresses immediately following are given for information.
I READ BACK	Read back text at reading speed.
I SAY AGAIN	Repeat previous transmission (or portion) as indicated.
I SPELL	I shall spell the next word phonetically.
I VERIFY	That which follows is verified at your request and is repeated.
IMMEDIATE	Precedence of message. (This is the highest used in MARS).
MORE TO FOLLOW	Additional message traffic will follow.

- NUMBER..... Station sequential message number. (Begin new numbering sequence each month.) This is the only item that changes on any message.
- OUT End of transmission. No answer is required or expected. **NEVER** used with the proword OVER.
- OVER..... End of transmission. Reply is expected and required. **NEVER** used with the proword OUT.
- PRIORITY Precedence of message. (This is second highest used in MARS).
- READ BACK..... Request for a read back text of message (or entire message) at reading speed.
- RELAY Retransmit this message to addressees or call sign that follows.
- ROGER Message received satisfactorily. This proword does not indicate agreement and is not a replacement for the word “YES”.
- ROUTINE Precedence of message. (This is the lowest used in MARS).
- SAY AGAIN..... Repeat all or portions of transmission as indicated.
- SERVICE Message redirected to originating stations for action as indicated.
- SILENCE All stations cease transmissions immediately. This condition will remain in effect until lifted.
- SILENCE LIFTED Normal net conditions reinstated.
- SPEAK SLOWER..... Slow copy speed.
- THIS IS Followed by call sign of station transmitting.
- TIME..... Followed by date-time group.
- TO Followed by address to which message is being sent.
- UNKNOWN STATION..... Unknown station with which communication is desired.
- VERIFY Verify entire message (or portion indicated) with the originator and send verified version.
- WAIT Pause for a few seconds. No return call to the net is necessary
- WAIT OUT Pause for longer than a few seconds and call upon return to the net. NOTE: Periods longer than five minutes **MUST** authorized by the net control station.

- WILCO..... Your signal received, I understand it and I will comply. Since the meaning of “ROGER” is included in that of WILCO, the two prowords are **NEVER** used together.
- WORD AFTER..... The word of the message to which I have reference is that which follows.
- WORD BEFORE The word of the message to which I have reference is that which proceeds.
- WORDS TWICE..... Transmit each word twice and spell phonetically if necessary. Often used during difficult periods of communications due to weather or EME interference.

ATTACHMENT 3



UNITED STATES AIR FORCE MILITARY AFFILIATE RADIO SYSTEM

DO NOT MAIL:
**WORK COPY
ONLY!**

MESSAGE

MONTHLY STATION SEQUENTIAL MESSAGE NO. _____

_____ THIS IS _____
(Station called phonetics) (Station calling phonetics)

MESSAGE NUMBER _____ TIME _____ ZULU _____
(Msg No.) (Precedence) (Month) (Year)

FROM: _____
(Name of originator – spell out phonetically) (MARS Call sign)

I SPELL or FIGURES _____
(Number) (Street name – phonetically) (City) (State)

FIGURES _____ PHONE FIGURES _____ HYPHEN _____ HYPHEN _____
(Zip code) (Area) (Telephone number)

SLANT CALLSIGN _____
(Originating station call sign and state if not originator)

TO: _____
(Name of addressee – phonetically) (MARS call sign)

I SPELL or FIGURES _____
(Number) (Street name – phonetically) (City) (State)

FIGURES _____ PHONE FIGURES _____ HYPHEN _____ HYPHEN _____
(Zip code) (Area) (Telephone number)

GROUPS _____ BREAK OVER (optional)
(Number)

Listen for all requests – after “ROGER” send text (No ID required here)

_____	05
_____	10
_____	15
_____	20
_____	25
_____	30

BREAK OVER (Receiving station must ID here)

DISPOSITION OF TRAFFIC: MAILED _____ PHONED _____

TOR: _____ TOD: _____

REFILED TO ARS: CALL _____ MSG # _____ MONTH _____ DAY _____

THIS MESSAGE WAS HANDLED THROUGH THE COURTESY OF MARS. YOU MAY REPLY THROUGH STATION _____
ADDRESS _____

Use back
of form
for
additional
groups.

ATTACHMENT 4

ARRL NUMBERED MESSAGES

Group One – For Possible “Relief Emergency” Use			
ONE	Everyone safe here. Please Don't worry.	FOURTEEN	Situation here becoming critical. Losses and damage from _____ increasing.
TWO	Coming home as soon as possible.	FIFTEEN	Please advise your condition and what help is needed.
THREE	Am in _____ hospital. Receiving excellent care and recovering fine.	SIXTEEN	Property damage very severe in this area.
FOUR	Only slight property damage here. Do not be concerned about disaster reports.	SEVENTEEN	REACT communications services also available. Establish REACT communications with _____ on channel _____.
FIVE	Am moving to new location. Send no further mail or communication. Will inform you of new address when relocated.	EIGHTEEN	Please contact me as soon as possible at _____.
SIX	Will contact you as soon as possible.	NINETEEN	.....Request health and welfare report on _____. (State name, address and telephone number.)
SEVEN	Please reply by Amateur Radio through the amateur delivering this message. This is a free public service.	TWENTY	Temporarily stranded. Will need some assistance. Please contact me at _____.
EIGHT	Need additional _____ mobile or portable equipment for immediate emergency use.	TWENTY ONE	Search and Rescue assistance is needed by local authorities here. Advise availability.
NINE	Additional _____ radio operators needed to assist with emergency at this location.	TWENTY TWO	Need accurate information on the extent and type of conditions now existing at your location. Please furnish this information and reply without delay.
TEN	Please contact _____. Advise to standby and provide further emergency information, instructions or assistance.	TWENTY THREE	Report at once the accessibility and best way to reach your location.
ELEVEN	Establish Amateur Radio emergency communications with _____ on _____ Mhz.	TWENTY FOUR	Evacuation of residents from this area urgently needed. Advise plans for help.
TWELVE.	Anxious to hear from you. No word in some time. Please contact me as soon as possible.	TWENTY FIVE	Furnish as soon as possible the weather conditions at your location..
THIRTEEN	Medical emergency situation exists here.	TWENTY SIX	Help and care for evacuation of sick and injured from this location needed at once.
Emergency/priority messages originating from official sources, must carry the signature of the originating official			

ARRL NUMBERED MESSAGES

Group Two - - Routine messages			
FORTY SIX	Greetings on your birthday and best wishes for many more to come.	SIXTY*	Wishing you the best of everything on _____.
FIFTY	.....Greetings by Amateur Radio.	SIXTY ONE	Wishing you a very merry Christmas and a happy New Year
FIFTY ONE	Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators here at _____. Am having a wonderful time.	SIXTY TWO*	. Greetings and best wishes to you for a pleasant _____ holiday season.
FIFTY TWO	Really enjoyed being with you. Looking forward to getting together again.	SIXTY THREE.	Victory or defeat, our best wishes are with you. Hope you win.
FIFTY THREE	Received your _____. It's appreciated; many thanks.	SIXTY FOUR	Arrived safely at _____.
FIFTY FOUR	Many thanks for your good wishes.	SIXTY FIVE	Arriving _____ on _____. Please arrange to meet me there.
FIFTY FIVE	Good news is always welcome. Very delighted to hear about yours.	SIXTY SIX	DX QSLs are on hand for you at the _____ QSL Bureau. Send _____ self addressed envelopes.
FIFTY SIX	Congratulations on your _____, a most worthy and deserved achievement.	SIXTY SEVEN	Your message number _____ undeliverable because of _____. Please advise.
FIFTY SEVEN	Wish we could be together.	SIXTY EIGHT	Sorry to hear you are ill. Best wishes for a speedy recovery.
FIFTY EIGHT	Have a wonderful time. Let us know when you return.	SIXTY NINE	Welcome to the _____. We are glad to have you with us and hope you will enjoy the fun and fellowship of the organization
FIFTY NINE	Congratulations on the new arrival. Hope mother and child are well.		
* Can be used for all holidays.			

ARRL Message Handling Instructions

Handling instructions (HX) convey special instructions to operators handling and delivering the message. The instruction is inserted in the message Preamble between the Precedence and the Station of Origin. Its use is optional with the originating stations, but once inserted it is mandatory with all relaying stations.

PROSIGN INSTRUCTION

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

An HX prosign (when used) will be inserted in the message preamble before the station origin, thus: NR 207 R HXA50 W1AW 12...(etc). If more than one HX prosign is used, they can be combined if no numbers are to be inserted; otherwise the HX should be repeated, thus NR 207 R HAXAC W1AW...(etc). On phone, use phonetics for the letter or letters following the HX, to ensure accuracy.

ATTACHMENT 5

MARS

OPERATING

INSTRUCTIONS



***AIR FORCE MARS OPERATING INSTRUCTION
1 JANUARY 2009***

**Communications and Information
*MILITARY AFFILIATE RADIO SYSTEM (MARS)
OPERATIONS***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

OPR: HQ AFCA/ESLM (Allen C. Eiermann)

Supersedes USAF MOI:
1 December 2005

Number of Pages: 85

This instruction sets forth responsibilities, operational characteristics, organizational structure, policy, and procedures for the operation of USAF MARS stations. This publication provides procedures and guidance on the operation and administration of the USAF MARS membership, station and network operation, and management of government property used in MARS as authorized by AFI 33-139, DoD Directive 4650.2, and other governing DoD and Air Force directives. This instruction applies to Air Force personnel, including Air Force Reserve, Air National Guard units, USAF MARS affiliates, and other military services' MARS personnel when operating on USAF MARS nets. MARS stations will use this publication in conjunction with other applicable publications governing military radio and MARS station operations procedures. Refer technical questions to Chief, USAF MARS, HQ AFCA/ECFP, 203 West Losey St., Rm 3100, Scott AFB, IL 62225-5222.

The Privacy Act of 1974, as amended, governs this instruction. The Application for membership is subject to AFI 33-332, Air Force Privacy Act Program (PA).

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CHAPTER 1 MISSION AND ORGANIZATION

1.1. MARS Mission.

1.1.1. Provide point-to-point record message, data, and voice communications that support personnel morale and welfare.

1.1.2. Provide DoD-sponsored emergency or contingency communications on a local, national, or international basis as an alternate communications capability.

1.1.3. Provide auxiliary communications for military and civil officials during periods of emergency.

1.1.3.1. Although support to civil agencies is authorized and encouraged, specific capabilities will not be developed by USAF MARS solely to serve civil needs, since other government and civil agencies have this assigned responsibility. Of specific importance is the assistance USAF MARS can provide to civil communities, under the provisions of DoD Directive 3025.1.

1.1.4. Provide primary or backup communications capability for base disaster response forces.

1.1.5. Handle morale and official record and communications traffic for armed forces and authorized government civilian personnel stationed throughout the world.

1.1.6. Creates interest and trains affiliates in military communications procedures.

1.1.7. Provides a source of trained radio operators to augment military communications personnel when needed.

1.2. Duties and Responsibilities:

1.2.1. The Air Force develops Air Force MARS policy and provides overall guidance for the Air Force MARS program.

1.2.2. **Chief, USAF MARS:**

1.2.2.1. Manages the MARS program for the Air Force.

1.2.2.2. Issues operating policy and instructions to MARS stations.

1.2.2.2.1. Develops and publishes guidelines and management procedures for MARS operations.

1.2.2.3. Represents the Air Force on the DOD Joint MARS Chiefs Panel, the National Communications System (NCS)-Shared Resources (SHARES) high frequency (HF) program, and various amateur-radio and regional-MARS conventions and conferences.

1.2.2.4. Coordinates with MARS Chiefs from other services on matters requiring joint-service resolutions, or requiring cross-service station sharing coordination.

1.2.2.5. Coordinates with MAJCOMs to:

1.2.2.5.1. Determine emergency and contingency communications requirements.

1.2.2.5.2. Respond to MARS frequency requests.

1.2.2.6. Coordinates MARS frequency utilization.

1.2.2.6.1. Validate frequency requests for submission to the Air Force Frequency Management Agency.

1.2.2.6.2. Allocates and manages assigned MARS repeater frequencies according to AFI 33-118, *Electromagnetic Spectrum Management* and AFI 33-120, *Electromagnetic Spectrum Management*.

1.2.2.7. Establishes a management structure to administer the affiliate's organization and control network operations using AF Form 3661, MARS Personnel Action Notification, and AF Form 3665, Military Affiliate Radio System Certificate of Appointment.

1.2.2.7.1. Appoints Area, Region and State MARS Directors, National Managers and coordinators; and other key officials as required to promote and implement MARS mission.

1.2.2.7.2. Approves auxiliary MARS stations in coordination with the host command (when exercised).

1.2.2.7.3. Authorizes affiliates to operate as a MARS station.

1.2.2.7.4. Directs applications for MARS membership to AMD for action and upon notice from AMD of successful completion of training, issues to the affiliate as follows: (a) AF Form 3666, Military Affiliate Radio System Station License; (b) Training Certificate; and (c) Identification Card.

1.2.2.7.5. Grants periods of inactive status to MARS affiliates on a case-by-case basis.

1.2.2.7.6. Manages membership voluntary and involuntary terminations.

1.2.2.8. Establishes procedures for MARS affiliates to access the government telephone systems.

1.2.2.9. Oversees the management of excess and surplus government property acquired for use in MARS through the MARS Accountable Property Officer.

1.2.2.9.1. Ensures MARS property records are established according to AFMAN 23-110, USAF Supply Manual, Volume 2, Part 2.

1.2.2.9.2. Approves requisitions for property for MARS utilization; this approval authority cannot be delegated. All approved requisitions will be processed through the USAF MARS Accountable Property Officer, who will initiate and sign a DD Form 1348-1A, Issue Release/Receipt Documents, to authorize release of identified property. Authority to sign release documents will not be delegated.

1.2.2.10. Serves as Air Force liaison for the amateur radio community

1.2.3. MAJCOM Communications Systems Offices:

1.2.3.1. Appoint a command MARS director, as necessary.

1.2.3.2. Identify MARS support requirements, as necessary.

1.2.3.3. Authorize appointment of installation MARS directors, as required.

1.2.3.4. Notify Chief USAF MARS of all appointments.

1.2.4. INSTALLATION MARS DIRECTOR (IMD), a position appointed at the discretion of the Installation Commander. Military MARS Stations are established with approval from the installation commander.

1.2.4.1 Responsible for providing a point of coordinating cooperatively between the military unit MARS station and the affiliate community.

1.2.4.2. Works with the base communications officer and/or Readiness Flight when MARS assets are requested to fulfill any disaster response communications requirements for their base.

1.2.4.3. Provide the Installation Commander and the Readiness Flight with information concerning MARS capabilities for planning purposes.

1.2.4.4. Ensure MARS tasking in local plans clearly specifies who, what, when, and where for communications support.

1.2.4.5. Maintain a roster of affiliate MARS and BST members in the local and state areas, who can provide assistance as required.

1.2.4.6. Insure BST members are trained IAW applicable procedures.

1.2.4.7. Establish recall procedures for personnel to respond to disaster or emergency communications support.

1.2.4.8. Establish procedures, including coordination, for deploying a mobile MARS communications (if applicable).

1.2.4.9. Conduct periodic exercises to include field operation of the MARS mobile facility (constructing and operating field stations, generating and forwarding message traffic, etc.).

1.2.5. **BASE SUPPORT TEAM (BST)**, a group of MARS members appointed at the discretion of the installation commander, volunteering to support a specified military installation with communications.

1.2.5.1. BST members must be capable of providing reliable communications support to their base of assignment under emergency/contingency conditions.

1.2.5.2. Each BST will consist of not more than 12 primary members.

1.2.5.3. Required to periodically exercise operational capabilities, at least annually.

1.2.5.4 The responsible SMD in cooperation with the IMD will appoint a BST Leader.

1.2.5.5 The BST Leader is the POC between the IMD and the BST affiliate members. The BST is responsible for reporting team affiliate participation time to the SMD, and the ARM/RRM.

1.3 Duties and responsibilities, National Affiliate Appointees.

1.3.1. **NATIONAL VOICE NET MANAGER**, a position appointed on an as needed basis by the USAF MARS Chief:

1.3.1.1. Direct operations on the TRANSCON Voice Net.

1.3.1.2. Serves as primary Net Control Station.

1.3.1.3. Maintains a list and schedule of selected members to serve as alternate NCS.

1.3.1.4. Controls the use of the assigned TRANSCON Voice frequencies

1.2.1.5. Ensures proper operating procedures, circuit discipline, and integrity are maintained.

1.3.1.6. Serve as primary contact point for any station needing communication support.

1.3.1.7. Maintains and forwards participation records quarterly to the respective Records Manager (ARM/RRM). This report will be submitted no later than the 10th day of the month following the end of the quarter.

1.3.1.8. Develop and distribute station procedures promoting the efficient flow of traffic and reducing in-station message handling time to a minimum.

1.3.1.9 Provides additional training for NCS members.

1.3.1.10. Must have the capability to operate on all TRANSCON Voice Frequencies.

1.3.1.11. Must have necessary computer skills for various duties that are associated with the position.

1.3.2. **NATIONAL EMERGENCY COORDINATOR**, a position appointed on an as needed basis by the Chief, USAF MARS to serve as manager for all USAF MARS activities involving Emergency Communications (ECOM).

1.3.2.1. Works closely with other TRANSCON National Managers to ensure that all MARS functions are available to support ECOM operations as needed.

1.3.2.2. Serve as primary liaison with Army and Navy-Marine Corps MARS leadership for coordinating ECOM exercises and actual operations.

1.3.2.3. Promote Joint Service operations during all ECOM exercises and operations.

1.3.2.4. Coordinate ECOM support for FEMA, SHARES and DoD as required in support of exercises and actual events.

1.3.2.5. Provide guidance for ECOM training and contingency operations in support of both exercises and actual emergencies/disasters.

1.3.2.6. Develop and coordinate a USAF MARS National Emergency Communications Plan. This plan will serve as a basic plan for all regions and states to develop their own plans to meet the specific needs of their jurisdictions.

1.3.2.7. Develops and forwards quarterly reports regarding ECOM activities for USAF MARS.

1.3.2.8. Must have the capability to operate throughout the HF spectrum and on various operating modes.

1.3.2.9. Must have necessary computer skills for various duties that are associated with the position.

1.3.3. **NATIONAL DIGITAL MANAGER**, a position appointed on an as needed basis by the Chief USAF MARS:

1.3.3.1. Responsible for the day-to-day management of the TRANSCON HF/VHF BBS networks and the TRANSCON Digital Net (TDN).

1.3.3.2. Determine the number of systems needed on the inter-region network for adequate traffic forwarding and appoint affiliate stations to be assigned.

1.3.3.3. Establish message centers located geographically to assure coverage throughout the CONUS.

1.3.3.4. Establish gateways to other services to assure the flow of traffic during exercises or in the event of an actual emergency.

1.3.3.5. Ensures all BBS stations are functioning to pass traffic efficiently.

1.3.3.6. Must have the capability to operate on all TRANSCON HF/VHF BBS frequencies.

1.3.3.7. Must have necessary computer skills for various duties that are associated with the position.

1.3.3.8. Provides training for membership that wishes to participate.

1.3.3.9. Maintains and forwards participation records to the respective Records Manager (ARM/RRM). This report will be submitted no later than the 10th day of the month following the end of the quarter.

1.3.3.10. Serves as or appoints a primary BBS Station.

1.3.3.11. Maintains a list and frequency schedule of selected SYSOPS.

1.3.3.12. Controls the use of the assigned TRANSCON HF/VHF BBS frequencies.

1.3.3.13. Ensures proper operating procedures, circuit discipline, and integrity are maintained.

1.3.3.14. Serve as primary contact point for any station needing communication support.

1.3.3.15. Fills out AF Form 3661 appointing members as BBS sysops and appointing members as Net Control Stations for the TRANSCON Digital Net.

1.3.3.16. Establishes system configuration standards for all BBS Systems Operators to follow.

1.3.4. **NATIONAL TRAINING MANAGER**, a position appointed on an as needed basis by the USAF MARS Chief:

1.3.4.1. Responsible for ensuring standardized training within all regions.

1.3.4.2. Responsible for publishing quality training material for new members.

1.3.4.3. Works closely with Area Training Managers to resolve training issues.

1.3.4.4. Must have necessary computer skills for various duties that are associated with the position.

1.3.5. **NATIONAL PHONE PATCH MANAGER**, a position appointed on an as needed basis by the Chief USAF MARS:

- 1.3.5.1. Responsible for the day-to-day management of the Phone Patch Network.
 - 1.3.5.2. Determine the number of personal needed for adequate traffic handling and appoint affiliate stations to be assigned.
 - 1.3.5.3. Establish procedures to other services to assure the flow of traffic during exercises or in the event of an actual emergency.
 - 1.3.5.4. Ensures all stations pass traffic efficiently.
 - 1.3.5.5. Must have the capability to operate on all TRANSCON Phone Patch frequencies.
 - 1.3.5.6. Must have necessary computer skill for various duties that are associated with the position.
 - 1.3.5.7. Provides training for new members.
 - 1.3.5.8. Maintains and forwards participation records to the respective Records Manager (ARM/RRM) This report will be submitted no later than the 10th day of the month following the end of the quarter.
 - 1.3.5.9. Serves as primary NCS Station.
 - 1.3.5.10. Maintains a list and frequency schedule of selected Members.
 - 1.3.5.11. Controls the use of the assigned TRANSCON Phone Patch frequencies.
 - 1.3.5.12. Ensures proper operating procedures, circuit discipline, and integrity are maintained.
 - 1.3.5.13. Serve as primary contact point for any station needing communication support.
 - 1.3.5.14. Fills out AF Form 3661 appointing members to be authorized phone patch operators.
 - 1.3.5.15. Ensure stations have the required capabilities prior to assignment to the phone patch net.
- 1.3.6. **NATIONAL AUTOMATIC LINKING ESTABLISHMENT (ALE) MANAGER**, a position appointed by Chief USAF MARS responsible for overall operation of the TRANSCON ALE Net.
- 1.3.6.1. Controls ALE sound card software (specifically MARSALE) distribution to authorized MARS members.

1.3.6.2. Serves as primary NCS station.

1.3.6.3. Maintains a list of ALE stations

1.3.6.4. Maintains a list and schedule of NCS stations.

1.3.6.5 Ensures proper operating procedures, circuit discipline, and integrity are maintained.

1.3.6.7. Responsible for the day-to-day management of the AF MARS ALE Network.

1.3.6.8. Establish procedures to other services to assure the flow of traffic during exercises or in the event of an actual emergency.

1.3.6.9. Must have the capability to operate on all TRANSCON ALE frequencies.

1.3.6.10. Must have necessary computer skill for various duties that are associated with the position.

1.3.6.11. Provides training for new members.

1.3.6.12. Maintains and forwards participation records to the respective Region Records Manager . This report will be submitted no later than the 10th day of the month following the end of the quarter.

1.3.7. **NATIONAL RECORDS MANAGER (NRM)**, a position assigned on an as needed basis by Chief USAF MARS:

1.3.7.1. Responsible for maintaining the MARS national affiliate member database.

1.3.7.2. Under the direction of Chief USAF MARS, establishes system which standardizes forms and format for all administrative reports and personnel actions.

1.3.7.3. Interacts with AMD, RMD, SMD and National Managers and Coordinators on behalf of Chief USAF MARS as needed to maintain national records database(s).

1.3.7.4. Must have necessary computer skill for various duties that are associated with the position.

1.3.7.5. The NRM shall periodically provide copies of the national database, or derivative copies as applicable to the ARM, to ensure correctness and accuracy of the national database.

1.3.8. **NATIONAL VHF COORDINATOR (NVC)**, a position assigned on an as needed basis by Chief USAF MARS:

1.3.8.1 All applications to USAF MARS for voice and digital repeaters will be forwarded to the NVC.

1.3.8.2. The NVC will maintain a registration of all VHF repeaters and digital repeaters/routers (digipeater), which are normally unmanned automated fixed station relays.

1.3.8.3. Then NVC in coordination with the respective SMD who is responsible for the repeater/digipeater, shall provide contact information for each repeater/digipeater, the shut down method for each repeater/digipeater, and within what period of time the repeater/digipeater can be shut down.

1.3.8.4. The NVC shall maintain the geographic coordinates, the transmitter output power, the elevation above sea level, the frequency, the mode of the transmitter, antenna feed line length and db loss, and type of antenna and gain of antenna, and the antenna is directional information regarding the antenna direction.

1.3.8.5. The NVC is expected to establish interoperations with the other MARS organization counterparts.

1.3.8.6 The NVC is responsible for maintaining a jacket file of all repeaters and digital repeaters, their transmitter ID, and shall provide this information to Chief USAF MARS, and be able to provide all the other above information as necessary and required by Chief USAF MARS pertinent to the operation of the transmitter.

1.3.9 **NATIONAL TECHNICAL SERVICES MANAGER**, a position appointed on an as needed basis, by the Chief USAF MARS.

1.3.9.1 Manage and direct the activities of the USAF MARS Technical Service.

1.3.9.2 Responds to request from the Chief USAF MARS, and AREA and Region Directions for technical resource support with information and guidance.

1.3.9.3 Responds to request from the Chief USAF MARS, and AREA and Region Directions to undertake, as possible, special projects in support of the USAF MARS program.

1.3.9.4 The individual appointed should be competent in the range of technology of the USAF MARS program.

1.3.9.5 The individual appointed should have a station capable of operation on most USAF MARS CONUS frequency and mode assignments.

1.3.9.6 The individual appointed should have computer equipment and skills necessary to meet the requirements of the position.

1.3.10 **NATIONAL EXERCISE COORDINATOR** is appointed by the Chief, USAF MARS to serve as coordinator for USAF MARS communications exercises (COMEX) that support the

USAF MARS Emergency Communications (ECOM) program and any military communications unit training as needed.

1.3.10.1 Develops a USAF MARS communications exercise (COMEX) program that supports the USAF MARS National ECOM Plan. The exercise plan provides MARS members with opportunities to develop, enhance and maintain proficiency in operating skills and procedures and also tests the MARS networks required to support the MARS mission at the local, regional and national level.

1.3.10.2 Assists the National ECOM Coordinator in identifying exercise goals that test and validate national, regional, area, state and joint service ECOM plans and MARS operator proficiency.

1.3.10.3 Serves as the primary exercise coordinator for USAF MARS. Working with the National ECOM Coordinator, provide guidance to USAF MARS Regional, Area and State MARS Directors, Emergency Coordinators and Exercise Coordinators in the development, planning, coordination and execution of exercises at all levels including joint service, SHARES and FEMA NECN exercises. Service as the USAF MARS liaison and coordinator for joint service exercises, SHARES and FEMA exercises.

1.3.10.4 Coordinates the availability of networks and systems with USAF MARS National Net managers, including TRANSCON Voice and Digital, Automatic Link Establishment, and Phone Patch Net, to ensure that MARS networks and systems are available to support exercises that test and enhance MARS capabilities.

1.3.10.5 Builds an exercise program that supports USAF MARS training of active duty, National Guard, and Reserve units as requested.

1.3.10.6 Assists local MARS officials with development, planning and execution of communications exercises with local ECOM partners including ARES, RACES, CAP and local military units.

1.3.10.7 Collects, analyzes and reports exercise results in the form of After Action Reports and Lessons Learned to the National ECOM Coordinator, RMDs, RECs, Regional/Area Exercise Coordinators and the National Training Manager. Reports should identify areas for improvement and highlight best practices. The National Exercise Coordinator should assist the National ECOM Coordinator and National Training Manager in facilitating changes that enhance the USAF MARS mission.

1.3.10.8 Assists Regional and Area MARS Directors in the selection and assignment of Regional and Area Exercise Coordinators.

1.3.10.9 Assists Regional and Area Exercise Coordinators in the development and implementation of a COMEX program that will enhance the USAF MARS mission at the local, area and regional levels.

1.3.10.10 Solicits exercise After Actions Reports and Lesson's Learned that identify "Areas For Improvement" and "Best Practices". Provides written reports to the National ECOM Coordinator and Training Manager for review and action as needed.

1.3.11 NATIONAL OPERATIONS OFFICER

1.3.11.1 A senior affiliate position appointed by the Chief, USAF MARS to work with the AMD/RMD's, NEC, and other national managers, to assist with the development and direct an operational response in cooperation with the NEC to developing incidents and events, particularly where those events may tax the resources of an Area or Areas.

1.3.11.2 Works with the NEC and NXC to develop realistic and appropriate ECOM exercise objectives.

1.3.11.3 Coordinates resources (frequencies, nets, personnel) and assists with operational and administrative tasks in response to ECOM incidents.

1.3.11.4 Is a National Point of Contact (POC) for a response to broad issues relating to operational response of the USAF MARS system

1.4 Duties and responsibilities, Area affiliate appointees.

1.4.1. **AREA MARS DIRECTOR (AMD)**, the senior affiliate management position in each Area. There are six operational Areas in the USAF MARS structure. There are the North East (NE), South East (SE), North Central (NE), South Central (SC), North West (NW), and South West (SW) Areas. It is a duty held for a period of two years, with reappointment option, by a highly qualified, mature, knowledgeable MARS member. Position appointment is made by the Chief USAF MARS. Incumbent serves as an extension staff member for the Chief Air Force MARS on matters pertaining to the affiliate program.

1.4.1.1 The AMD is responsible to implement the mission of MARS in each Area. The purpose of each Area is HF operations nets, inter-Area coordination and cooperation, affiliate training, emergency preparedness exercises and administrative support where necessary.

1.4.1.2. Participates in all Area administrative actions and radio nets.

1.4.1.3. Coordinates with other AMD(s), RMD(s) within the Area and immediately adjacent to the Region, SMD's located in the Area, and the Area net manager(s).

1.4.1.4. Reviews all operational and technical affiliate correspondence moving through Area channels.

1.4.1.5. Appoints only the most qualified members to the Area staff.

1.4.1.6. Makes interim state MARS director and RMD appointments in the event an unscheduled vacancy occurs in the Region(s) of his/her jurisdiction.

1.4.1.7. Appoints Area staff positions as indicated.

1.4.1.8. Attends Area, Region, and state conferences as time and finances permit.

1.4.1.9. Maintains a HF radio station capable of operating on all assigned Area and Area/Region frequencies.

1.4.1.10. Must have necessary computer skill for various duties that are associated with the position.

1.4.2. **DEPUTY AREA MARS DIRECTOR (D/AMD)**, a primary duty held by a highly qualified MARS member for a period of two years, with reappointment option. Position appointment is made by the AMD, with the concurrence of the Chief USAF MARS.

1.4.2.1. Serves as the AMD in his absence (see paragraph 1.2.12). (This position could also serve as the Region Director in the Areas / Regions sharing the same boundaries, i.e. SE, SC, SW)

1.4.3. **AREA TECHNICAL SERVICE MANAGER (ATSM)**, a duty held by an individual with a technical experience background in electronics. Position appointment and length of service are set by the AMD.

1.4.3.1. Responsible for organized technical studies and projects assigned within the region.

1.4.3.2. Responsible for assisting region members with equipment situations.

1.4.3.3. Advises the AMD on all MARS Technical Services (MTS) matters.

1.4.3.4. Compiles MTS quarterly activity report and forwards to the Area Records Manager (ARM).

1.4.3.5. Maintains a liaison with other Area and Region staff members to determine suitable MTS projects, share information and experience, and avoid duplication of efforts from one region to another.

1.4.3.6. Approves or otherwise acts on projects/proposals from the AMD, RMD(s), SMD(s) or other members within the Area and Region(s).

1.4.3.6.1 Provides for monitoring services with designated affiliates, as needed, on Area and Region(s) frequencies

1.4.3.7. Attends state and region conferences as time and finances permit.

1.4.3.8. Conducts technical education seminars.

1.4.3.9. Computer skills are necessary for various administrative duties that are associated with the position.

1.4.4. AREA OPERATIONS OFFICER(AOO)

1.4.4.1. A senior affiliate position appointed by the AMD to work with the AEC, net managers, region liaison officer(s), RMD's, SMD's and SEC's to develop and direct an operations response to developing incidents and events.

1.4.4.2. Works with the AEC and AXC to develop realistic and appropriate exercise objectives.

1.4.4.3 Coordinates resources (frequencies, Nets, personnel) and assists with operational and administrative tasks in response to ECOM incidents.

1.4.5. AREA TRAINING MANAGER (ATM), a duty held by an individual knowledgeable in MARS communications procedures. Position appointment and tenure are made by the AMD. Manages the Area affiliate HF operator and Net Control Station (NCS) training programs.

1.4.5.1. Establishes HF Area training net and ensures each new MARS member receives initial training prior to being assigned to an operational position.

1.4.5.2. Provides training to members in the Area to include net operations, procedures, and voice operations.

1.4.5.3. Develops training network schedules.

1.4.5.4. Coordinates training with the AMD, RMD(s) and the SMDs.

1.4.5.5. Coordinates and develops other specialized training.

1.4.5.6. Ensures training is in compliance with the established training material.

1.4.5.7. Identifies areas needing corrective training or education.

1.4.5.8. May assign an assistant training manager(s) based on ability, equipment, and location.

1.4.5.9. Provides monthly participation and trainee report(s) to ARM, ARM, RMD, RRM and the SMD

1.4.5.10. Requires providing on-the-air HF training.

1.4.5.11. Computer skills are necessary for various administrative duties that are associated with the position.

1.4.5.12. Maintains a HF radio station capable of operating on all assigned Area and Area/Region frequencies.

1.4.6. **AREA RECORDS MANAGER (ARM)**, a duty held by an individual with good administrative skills. Position appointment and length of service are made by the AMD.

1.4.6.1. Compiles all MARS activity reports for the Area providing data as directed by the AMD.

1.4.6.2. Takes follow-up action on missing reports.

1.4.6.3. Advises AMD of activity report submission and compilation problems or problem areas.

1.4.6.4. Compiles a report regarding USAF MARS activities within the Area. This report will be forwarded to Chief, USAF MARS thru the AMD.

1.4.6.5. Requires access to computer equipment to generate reports for the USAF MARS Office and other Area Officials.

1.4.6.6. Computer skills are necessary for various administrative duties that are associated with the position.

1.4.7. **AREA EMERGENCY COORDINATOR (AEC)**, a position appointed by the AMD.

1.4.7.1. Organize and coordinate all Area ECOM activities to include planning for exercises, contingencies and support for actual emergencies.

1.4.7.2. Provide the ARM and National Emergency Coordinator with activity reports and status of ECOM programs in the Area.

1.4.7.3. Possess sufficient communications capabilities to operate throughout the HF spectrum and various operating modes.

1.4.7.4. Assists the RECs, RMDs, SMDs and SECs to establish and coordinate their ECOM programs.

1.4.7.5. Develop/update an Area Emergency Communications Plan to supplement the National ECOM Plan. This plan will provide guidance for all members to follow.

1.4.7.6. Promote Joint Service operations during all ECOM exercises and operations throughout the Area.

1.4.7.7. Computer skills are necessary for various administrative duties that are associated with the position.

1.4.7.8. Maintains a roster of all Area SECs.

1.4..8. **AREA PUBLIC INFORMATION OFFICER (APIO)**, a duty held by an individual with writing and speaking skills. Position appointment and length of tenure are determined by the AMD.

1.4.8.1. Maintains liaison with all Area Officials.

1.4.8.2. Maintains and forwards news items acquired from region media sources to ARM for input into the quarterly report.

1.4.8.3. Serves as a staff adviser on matters of journalism and publications to the AMD and RMD(s).

1.4.8.4. Provides assistance to MARS members in preparing items for release to news media.

1.4.8.5. News releases about the MARS program or its participants are permissible, provided a disclaimer statement is used. The following disclaimer must accompany any items provided by local MARS members or groups to the news media: *"This is not an official United States Air Force release, and does not necessarily reflect the views of the Air Force or National Air Force MARS organization."* This is not an attempt to manage (or limit) news, but to help news organizations identify the source of their material.

1.4.8.6. Attends Area, Region and state meetings/conferences as time/finances permit.

1.4.8.7. Computer skills are necessary for various administrative duties that are associated with the position.

1.4.9. **AREA DIGITAL NETWORK MANAGER (ADNM)**, a duty held by an individual knowledgeable in the various digital transmitting techniques. Position appointment and length are determined by the AMD.

1.4.9.1. Coordinates BBS System Operators (Sysops) within the Area, in the development and maintenance of an Area Emergency/Disaster Support Program.

1.4.9.2. Determines a routing for traffic within the Area, so each Area is doing its part to implement the policies established by the NDNM.

1.4.9.3. Works closely with the National Digital Network Manager and National ALE Manager.

1.4.9.4. Requires ability to operate on all MARS frequencies, and in all MARS digital modes (both HF and VHF).

1.4.9.5. Fluency in the management of automated Bulletin Board Systems (BBSs) and message routing is required.

1.4.9.6. Computer skills are necessary for various duties that are associated with the position.

1.4.10. **AREA VOICE NETWORK MANAGER (AVNM)**, a duty held by an individual knowledgeable in voice transmitting techniques. Position appointment and length are determined by the AMD.

1.4.10.1. Directs operations of the Area HF voice network and submits activity report to the ARM.

1.4.10.2. Assigns selected members to serve as net control stations to the region HF voice network.

1.4.10.3. Maintains a list and schedule of selected members to serve as net control stations to the region HF voice network.

1.4.10.4. Serves as primary Net Control Station.

1.4.10.5. Ensures proper operating procedures, circuit discipline, and integrity are maintained.

1.4.10.6. Maintains and forwards participation records quarterly to the respective Area Records Manager (ARM). This report will be submitted no later than the 10th day of the month following the end of the quarter.

1.4.10.7. Provides additional training for NCS members.

1.4.10.8. Requires ability to operate on all MARS HF voice frequencies.

1.4.10.9. Computer skills are necessary for various duties that are associated with the position.

1.4.11. **AREA EXERCISE COORDINATOR (AXC)**, a position appointed by the AMD.

1.4.11.1. Organize and coordinate all Area ECOM exercise activities to include planning for exercises, contingencies, and direction of exercises, working with the Area Emergency coordinator.

1.4.11.2. Provide the ARM and the Area Emergency Coordinator with activity reports and status of ECOM exercises in the Area.

1.4.11.3. Possess sufficient communications capabilities to operate throughout the HF spectrum and various operating modes.

1.4.11.4. With the AEC assists the REC(s), SMDs and SECs to establish and coordinate their ECOM programs.

1.4.11.5. Promote Joint Service operations during all ECOM exercises and operations throughout the Area.

1.4.11.6. Computer skills are necessary for various administrative duties that are associated with the position.

1.4.11.7. Maintains a roster of all Area SECs.

1.4.12. **AREA ASSISTANT ALE COORDINATOR (ALEC)**, a position appointed by the National ALE Manager, to assist with the development and management of ALE in the Area. The incumbent in the Area Digital Network Manager position, could perform these duties with the approval of the National ALE Coordinator.

1.4.13. **AREA VHF COORDINATOR (AVC)**, a position appointed by the AMD to develop, direct and manage the VHF assets and activities in the Area.

1.4.8.1. The AVC will maintain a registration of all Area VHF repeaters and digital repeaters/routers (digipeater), which are normally unmanned automated fixed station relays.

1.4.8.3. The AVC in coordination with the respective SMD, shall maintain a record of contact information for each repeater/digipeater, the shut down contact and method for each repeater/digipeater, and within what period of time the repeater/digipeater can be shut down.

1.4.8.4. The AVC shall maintain records of the geographic coordinates, the transmitter output power, the elevation above sea level, the frequency, the mode of the transmitter, antenna feed line length and db loss, and type of antenna and gain of antenna, and the antenna is directional information regarding the antenna direction.

1.4.8.5. The AVC is expected to establish interoperations with the other MARS organization counterparts.

1.5 Duties and responsibilities, Region Affiliate Appointees.

1.5.1. **REGION MARS DIRECTOR (RMD)**, the senior affiliate management position in each region. It is a primary duty held, for a period of two years, with reappointment option, by a highly qualified, mature, knowledgeable MARS member. Position appointment is made by the Chief, USAF MARS with counsel from the AMD responsible for the region. The RMD is eligible to and may also serve as the Deputy Area Director.

1.5.1.1 Although appointed by the Chief, USAF MARS, the RMD is subordinate to the AMD in the Chain of Command, and performs duties as directed by the AMD.

1.5.1.2. The RMD is responsible to implement the mission of MARS in each Region. The purpose of each Region is interoperability in the Tri Service environment, and support of DoD and selected government agencies in the region.

1.5.1.3. Participates in all region administrative actions and radio nets.

1.5.1.4. Coordinates with other Area Officials, RMDs, SMDs, and the Area net manager(s).

1.5.1.5. Reviews all operational and technical affiliate correspondence moving through region channels.

1.5.1.6. Appoints only the most qualified members to the region staff.

1.5.29.7. Appoints and directly supervises all region affiliate member operations.

1.5.29.8. Attends Area, Region and state conferences as time and finances permit.

1.5.29.9. Maintains a HF radio station capable of operating on all assigned Area and region frequencies.

1.5.1.10. Must have necessary computer skill for various duties that are associated with the position.

1.5.2. **DEPUTY REGION MARS DIRECTOR (D/RMD)**, a primary duty held by a highly qualified MARS member for a period of two years. Position appointment is made by the RMD.

1.5.2.1. Serves as the RMD in his/her absence (see paragraph 1.2.27).

1.5.3. **REGION TECHNICAL SERVICE MANAGER (RTSM)**, a primary duty held by an individual with background technical experience in electronics. Position appointment and length of service are set by the RMD.

1.5.3.1. Responsible for organized technical studies and projects assigned within the region.

1.5.3.2. Responsible for assisting region members with equipment situations.

1.5.3.3. Advises the RMD on all MARS Technical Services (MTS) matters.

1.5.3.4. Compiles MTS quarterly activity report and forwards to the RRM.

1.5.3.5. Maintains a liaison with other region (and out of region) staff members to determine suitable MTS projects, and no duplication of efforts from one region to another.

1.5.3.6. Approves or otherwise acts on projects/proposals from the RMD, SMD, or other members within the region.

1.5.3.7. Attends state and region conferences as time and finances permit.

1.5.3.8. Conducts technical education seminars.

1.5.3.9. Computer skills are necessary for various administrative duties that are associated with the position.

1.5.4. **REGION LIAISON OFFICER (RLO)**, a primary duty held by a highly qualified, mature MARS member. Position appointment and length are made by the RMD.

1.5.4.1. Position is responsible for assisting RMD to effectuate interoperability policies regarding the Tri-Services MARS program

1.5.4.2. Serves as the point of contact for the DoD and NGO clients in the region.

1.5.5. **REGION TRAINING MANAGER (RTM)**, a primary duty held by an individual knowledgeable in MARS communications procedures. Position appointment and tenure are made by the RMD. Manages the regional affiliate HF operator training program and Net Control Station (NCS) training program.

1.5.5.1. Assists the ATM, with training nets, mentoring of trainees in the region, and as a resource for region training issues..

1.5.5.2. Provides training to members in the region to include net operations, procedures, and voice operations.

1.5.5.3. Develops training network schedules.

1.5.5.4. Coordinates training with the SMDs and the ATM and the RMD.

1.5.5.5. Coordinates and develops other specialized training.

1.5.5.6. Ensures training is in compliance with the established training material.

1.5.5.7. Identifies areas needing corrective training or education.

1.5.5.8. If required, may assign an assistant training manager based on ability, equipment, and location.

1.5.5.9. Provides monthly participation and trainee report(s) to AMD, ARM, RMD, RRM, ATM and the SMD.

1.5.5.10. Requires providing on-the-air HF training.

1.5.5.11. Computer skills are necessary for various administrative duties that are associated with the position.

1.5.6. **REGION RECORDS MANAGER (RRM)**, a primary duty held by an individual with good administrative skills. Position appointment and length of service are made by the RMD.

1.5.6.1. Compiles all MARS activity reports for the region, providing data as directed by the RMD.

1.5.6.2. Takes follow-up action on missing reports.

1.5.6.3. Advises RMD of activity report submission and compilation problems or problem areas.

1.5.6.4. Compiles a report regarding USAF MARS activities within the region. This report will be forwarded to Chief, USAF MARS thru the RMD.

1.5.6.5. Requires access to computer equipment to generate reports for the USAF MARS Office and other Region Officials.

1.5.6.6. Computer skills are necessary for various administrative duties that are associated with the position.

1.5.7. **REGION EMERGENCY COORDINATOR (REC)**, a position appointed by the RMD.

1.5.7.1. Organize and coordinate all regional ECOM activities to include planning for exercises, contingencies and support for actual emergencies. A minimum of two exercises should be performed per calendar year.

1.5.7.2. Provide the RMD, RRM, ARM and ARC with activity reports and status of ECOM programs in their region.

1.5.7.3. Possess sufficient communications capabilities to operate throughout the HF spectrum and various operating modes.

1.2.34.4. Assists the SMDs and SECs to establish and coordinate their ECOM programs.

1.5.7.5. Develop/update a Regional Emergency Communications Plan to supplement the National ECOM Plan. This plan will provide guidance for all members to follow.

1.5.7.6. Promote Joint Service operations during all ECOM exercises and operations throughout the region.

1.5.7.7. Computer skills are necessary for various administrative duties that are associated with the position.

1.5.7.8. Maintains a roster of all SECs in the region.

1.5.8. **REGION PUBLIC INFORMATION OFFICER (RPIO)**, a primary duty held by an individual with writing and speaking skills. Position appointment and length of tenure are determined by the RMD inclusion in their files.

1.5.8.1. Maintains liaison with all Region Officials.

1.5.8.2. Maintains and forwards news items acquired from region media sources to RRM for input into the quarterly report.

1.5.8.3. Serves as a staff adviser on matters of journalism and publications to the RMD.

1.5.8.4. Provides assistance to MARS members in preparing items for release to news media.

1.5.8.5. News releases about the MARS program or its participants are permissible, provided a disclaimer statement is used. The following disclaimer must accompany any items provided by local MARS members or groups to the news media: "This is not an official United States Air Force release, and does not necessarily reflect the views of the Air Force or Air Force MARS." This is not an attempt to manage (or limit) news, but to help news organizations identify the source of their material.

1.5.8.6. Attends region and state meetings/conferences as time/finances permit.

1.5.8.7. Computer skills are necessary for various administrative duties that are associated with the position.

1.5.9. **REGION DIGITAL NETWORK MANAGER (RDNM)**, a duty held by an individual knowledgeable in the various digital transmitting techniques. Position appointment and length are determined by the RMD.

1.5.9.1. Coordinates BBS System Operators (Sysops) within the region, in the development and maintenance of a Region Emergency/Disaster Support Program.

1.5.9.2. Determines a routing for traffic within their individual regions, so each region is doing its part to implement the policies established by the RDNM.

1.5.9.3. Works closely with the National Data Manager and National ALE Manager.

1.5.9.4. Requires ability to operate on all MARS frequencies, and in all MARS digital modes (both HF and VHF).

1.5.9.5. Fluency in the management of automated Bulletin Board Systems (BBSs) and message routing is required.

1.5.9.6. Computer skills are necessary for various duties that are associated with the position.

1.5.10. **REGION VOICE NETWORK MANAGER (RVNM)**, a duty held by an individual knowledgeable in voice transmitting techniques. Position, appointment and length are determined by the RMD on an as needed basis.

1.5.10.1. Directs operations of the region HF voice network and submits activity report to the RRM.

- 1.5.10.2. Assigns selected members to serve as net control stations to the region HF voice network.
- 1.5.10.3. Maintains a list and schedule of selected members to serve as net control stations to the region HF voice network.
- 1.5.10.4. Serves as primary Net Control Station.
- 1.5.10.5. Ensures proper operating procedures, circuit discipline, and integrity are maintained.
- 1.5.10.6. Maintains and forwards participation records quarterly to the respective RRM. This report will be submitted no later than the 10th day of the month following the end of the quarter.
- 1.5.10.7. Provides additional training for NCS members.
- 1.5.10.8. Requires ability to operate on all MARS HF voice frequencies.
- 1.5.10.9. Computer skills are necessary for various duties that are associated with the position.
- 1.6 Duties and responsibilities, State Affiliate appointments.
 - 1.6.1. **STATE MARS DIRECTOR (SMD)**, the senior affiliate management position in each state. Position appointment, which runs for two years, with reappointment option, is made by the Chief, USAF MARS, in consultation with appropriate AMD. The SMD, Deputy SMD and State Emergency Coordinator are the only positions provided official call signs.
 - 1.6.1.1 Although appointed by the Chief, USAF MARS, the SMD is subordinate to the AMD/RMD in the Chain of Command. The AMD/RMD, directs the activities of the SMD.
 - 1.6.1.2. Responsible for the management of MARS operations and affiliate member activities within the state and for providing services to customers (military, civilian, and intrastate MARS components).
 - 1.6.1.3 The SMD is the administrative point of contact (POC) for all affiliates in the state.
 - 1.6.1.4. Appoints and manages a staff consisting of an emergency coordinator. An assistant state director may be appointed, if required.
 - 1.6.1.5. Provides members for assignments to region, TRANSCON, and special nets as needed.
 - 1.6.1.6. Provides participation information pertaining to all state members (including BST members) to the RRM.
 - 1.6.1.7. Appoints a state staff if needed. This staff will consist of those people required to assist the SMD in accomplishing certain duties that require further assistance.

- 1.6.1.8. Develops emergency support capability and an alerting network within the state.
- 1.6.1.9. Initiates AF Form 3661 action on state members IAW current procedures.
- 1.6.1.10. Maintains an individual file on each member in the state.
- 1.6.1.11. Reviews each membership application prior to submission to the RMD.
- 1.6.1.12. Assigns net designators for all state VHF nets.
- 1.6.1.13. Endorses member equipment requests and forwards them to the USAF MARS Accountable Property Officer.
- 1.6.1.14. Provides IMDs with a current membership list every six months.
- 1.6.1.15. Assigns sponsors to new affiliate members to assist in program indoctrination.
- 1.6.1.16. Coordinates operation of VHF operations within the state and works with adjacent state SMDs regarding cross-border VHF operations.
- 1.6.1.17. Duties require that HF and VHF (If used) equipment be operational on all region MARS frequencies.
- 1.6.1.18. Must be available for coordinating administrative and traffic nets.
- 1.6.1.19. Attends state and regional MARS meetings as required, time and finances permitting.
- 1.6.1.20. Computer skills are necessary for various duties that are associated with the position.
- 1.6.1.21. Approves all equipment transfers between affiliate members.
- 1.6.2. **DEPUTY STATE MARS DIRECTOR (D/SMD)**, a primary duty held by a highly qualified MARS member for a period of two years. Position appointment is made by the SMD.
 - 1.6.2.1. Serves as the SMD in his/her absence (see paragraph 1.2.37).
- 1.6.3. **STATE EMERGENCY COORDINATOR (SEC)**, a position appointment and tenure are determined by the SMD.
 - 1.6.3.1. Organize and coordinate all state ECOM activities to include planning for exercises, contingencies and support for actual emergencies. A minimum of two exercises should be performed per calendar year.
 - 1.6.3.2. Provide Regional Emergency Coordinator with activity reports and status of ECOM programs in their region.

1.6.3.3. Possess sufficient communications capabilities to operate throughout the HF spectrum and various operating modes.

1.6.3.4. Work closely with the Regional Emergency Coordinator and the SMD to develop/update a State Emergency Communications Plan to supplement the Regional ECOM Plan. This plan will provide guidance for all state members to follow.

1.6.3.6. Promote Joint Service operations during all ECOM exercises and operations throughout the region.

1.6.3.7. Computer skills are necessary for various administrative duties that are associated with the position.

1.7 Duties and responsibilities, Affiliate Members

1.7.1. **AFFILIATE MEMBER STATIONS** are amateur radio stations licensed by the Federal Communications Commission (FCC) and approved for MARS membership by the Chief, USAF MARS. The terms “Member(s),” “Affiliate(s),” and “Affiliate Member(s)” shall have the same meaning for the purpose of this MOI.

1.7.1.1. Maintain a copy of USAF MOI.

1.7.1.2. Reads, monitors, and adheres to all USAF MARS Broadcasts.

1.7.1.3. Comply with the provision of USAF MOI and other Air Force Instructions governing MARS operations, including MARS broadcasts.

1.7.1.4. Maintain an operational NTIA compliant (per 2.2.5.1. of the MOI) HF radio station (If VHF is used, it must also be NTIA compliant) and actively support USAF MARS HF communications requirements.

1.7.1.5. Participate a minimum of twelve (12) hours each calendar quarter. The member’s primary assignment will be to the regularly scheduled Area HF voice net by the SMD, unless appointed to a specialty net with primary assignment status, by action of AF Form 3661, and consent of the SMD. A minimum of six (6) hours per calendar quarter is required in the primary assignment. The balance of these the twelve (12) hours per calendar quarter may be on any established MARS radio net. All affiliates regardless of primary net assignment must file a written report of their activity with their respective SMD on a monthly basis not later than ten (10) days after the end of the month.

1.7.1.6. Maintain, safeguard, and account for excess/surplus government property received from USAF MARS.

1.7.1.7. Maintain a current amateur license and keep the state MARS director apprised of all changes that affect membership status (e.g., a change in station location, license level, mailing address, e-mail address, phone number, or station capability).

1.7.1.8. Give technical help, construction, and experimentation support to the MARS program.

1.7.1.9. Provide operations, maintenance, or administrative support to installation MARS directors, when requested.

1.7.1.10. Avoid, while operating on MARS frequencies, any deliberate action or conduct that would reflect unfavorably on the individual member or USAF MARS.

1.7.1.11. Attend and contribute to MARS meetings and conferences, time and finances permitting.

1.7.1.12. Maintain a station log.

1.8 Affiliate Official Appointments

1.8.1. Affiliate Official Appointments are a controlled and orderly process to periodically rotate civilian officials with other qualified members is an essential part of a dynamic and progressive MARS program. Therefore, the appointment of affiliate members to the positions of Area MARS Director (AMD), Region MARS Director (RMD), or State MARS Director (SMD) will be for a term of two (2) years, (1 Jan – 31 Dec of following year) with renewal at the discretion of the Chief, USAF MARS. Newly appointed members will use interim months after appointment as a period of transition to be familiarized with procedures and responsibilities of their positions. AMD appointments in Areas NE, NC, and NW will be in odd numbered years (e.g. 2011, 2013, etc.). AMD appointments in Area SE, SC, and SW, will be in even numbered years (e.g. 2010, 2012, etc.). SMD appointments in regions one, three, five, seven and nine will be made in odd numbered years (e.g., 2011, 2013, etc.). SMD appointments in regions two, four, six, eight and zero will be made in even numbered years (2010, 2012, etc.).

1.8.2. Positions to be filled will be announced in a MARS broadcast message. Applicants must submit a brief resume stating their qualifications, past experience, station capability, and willingness to serve in the position. All resumes must arrive at USAF MARS office as announced in the message.

1.8.3. Selection will take place during October each year by the Chief, USAF MARS. The Chief will:

1.8.4.1. Review the qualifications and records of each applicant.

1.8.4.2. Confer with the appropriate AMD/RMD

1.8.4.3. Forward letters of selection and AF Form 3661's (MARS Personnel Action Notification) to those individuals selected.

1.8.4.4. Forward letters of non-selection to those individuals not chosen.

1.8.4.5. Special Net Manager (SNM) Appointments are direct appointments by the Chief, USAF MARS, on an "as required" basis. These are usually for unique positions of either short or long term duration.

1.8.5. All Outgoing Officials (National, Area, Regional, or State) will:

1.8.5.1. Contact the new official and make arrangements for the transition.

1.8.5.2. Forward pertinent records to the new official.

1.8.5.3. Provide necessary assistance to promote continuity of operation.

1.8.5.4. Transfer any MARS equipment obtained from DRMO that is required for the position.

1.8.6. The Area, Region and State staff may vary, dependent upon the tasking needs of each entity. Each AMD, RMD and SMD will appoint his/her region staff dependent upon the specific needs and availability of members possessing the requisite skills to fulfill the duties of reach position.

CHAPTER 2

MEMBERSHIP APPLICATION, ASSIGNMENTS and TRAINING

2.1. Because emergencies and contingencies are not restricted geographically to military installations, there is a requirement to establish MARS communication nets configured to support a wide spectrum of potential applications over a wide range of territory. Area, Region and TRANSCON HF voice and digital traffic systems are the backbone of USAF MARS' HF communication networks. With the exception of the national phone patch net, most USAF MARS traffic is passed on these nets. Therefore, support of these nets depends on recruiting HF capable amateur radio operators. In recognition of the fact that many of the USAF MARS high frequencies are not located near the amateur bands, members with continuous 3 to 30 MHz capability should be actively recruited to satisfy system requirements.

2.2. Eligibility Criteria.

2.2.1. Minimum age of members is 17 years.

2.2.2. Applicants and/or current members must be a citizen of the United States, or lawfully admitted to the US. for permanent residency under the provisions of Title 18, United States Code, Chapter 12, and reside within the borders of the US, its territories, or possessions. This applies to alien residents who are U. S. military members and their families stationed overseas under an overseas military command's jurisdiction.

2.2.3. Applicants and/or current members must hold a valid amateur radio operator's license issued by the Federal Communications Commission (FCC).

2.2.4. Applicants and/or current members must have an operational HF radio station prior to acceptance into the MARS program.

2.2.4.1 HF stations must be capable of operating on (or which can be modified to operate) a minimum of two MARS frequencies, assigned by Area and Region MARS officials.

2.2.4.2. HF stations must have the capability of operating voice and one or more of the digital modes.

2.2.4.3. All HF radio equipment must have a frequency stability and tolerance of +/- 20 Hz as set by the National Telecommunications Information Administration (NTIA).

2.2.5. MARS has no requirements for VHF operations. However if VHF is used, it is used to complement the HF station, providing critical "first mile/last mile" connectivity. It must also comply with the specifications set by the NTIA.

2.2.5.1. Per the NTIA, by 1 January 2008 all VHF equipment must not exceed a frequency deviation of +/- 3.11 kHz, and have a channel spacing of 12.5 kHz (or less).

2.3. Individual membership applications will be made using the membership application form.

2.3.1. Each new applicant will be provided a copy of the MARS application form, as well as the address of the appropriate SMD

2.3.2. The new applicant will be assisted in completing the form and send it to the SMD. The SMD will review the application for completeness, accuracy, and eligibility, and then forward it to the AMD for processing.

2.3.3. The AMD will assign an "AFA# xx/T" call sign, enter the info into the Air Force MARS database program, initiate an AF Form 3661 assigning the individual to the Area training net. The AF Form 3661 will be the authorization for the individual to operate on the MARS training nets. No MARS station license will be issued until the member successfully completes the required training. At that time the "/T" will be removed.

2.3.4. The AMD will distribute the completed MARS application, along with the AF Form 3661 back to the applicant, Chief, USAF MARS, AMD, RMD, RRM, ATM, and the ARM, SMD and the NRM.

2.3.5. After successful completion of the training, the ATM will notify the AMD, RMD, SMD and individual. The AMD create a new AF Form 3661 to change the call sign by deletion of the "/T" from the call sign and include an initial primary assignment of the individual to the Area Voice Net. The AMD will forward copies of the AF MARS Application, Federal Communications Commission Amateur Radio Operator License, the new AF Form 3661 assigning the station its call sign including initial primary net assignment, and notification of successful completion of training to Chief, USAF MARS. Chief, USAF MARS shall then initiate the MARS station license, ID card, and training certificate. These documents will be distributed as appropriate..

2.3.5.1. Except as otherwise stated in this MOI, the SMD will then subsequently be responsible to initiate a form AF Form 3661 assigning the individual to a primary net assignment, and distribute as appropriate.

2.3.5.2. Initial affiliate training must be completed within one-hundred (180) days of the issuance of AF Form 3661 by the AMD.

2.3.5.2.1 An extension to initial affiliate training may be approved by the AMD upon good cause and prior request by the trainee and the SMD. If the extension to initial affiliate training is approved by the AMD, the AMD shall prepare and distribute AF Form 3661 back to the trainee, Chief, USAF MARS, AMD, RMD, ATM, ARM, SMD and the NRM.

2.3.6. No waivers for the training requirement will be allowed with the exception of active duty or Reserve personnel with an AFSC of 3C1XX (Communications System Radio Operator).

2.4. All training and training materials will be based upon this MOI and the following publications:

- Allied Communications Publication (ACP) 121, *Communications Instructions General*

- ACP 125, *Communications Instructions Radio Telephone Procedures*
- AF MARS Training Manual
- AF MARS Emergency Communications Plan 2005-1, dated 17 Oct 2005

2.4.1. Regions may write supplements to the AF MARS Training Manual and the AF MARS Emergency Communications Plan. These supplements cannot change the basic content, but can provide additional information that is specific to their region.

2.4.2. It is highly suggested all National Managers publish a training guide for their respective areas. These guides should be published within the AFMARS Training Manual.

2.5. Affiliate stations may operate on any frequency or mode assigned on an AF Form 3661, MARS Personnel Action Notification. They may also operate on any VHF frequency assigned to MARS, TRANSCON voice, or region HF without an AF Form 3661 assignment. All phone patch operations are considered closed assignments. While in training status, new members are restricted to Area, Region and State HF training or VHF frequencies only in the Area, Region and State where the trainee's residence is located.

2.5.1. The establishment of a BBS, ALE, or a PHONE PATCH Station is not authorized while in training status.

2.5.2. Trainees shall be provided Initial Net Control Station training in conformance with the National Training Manual. However, trainees must successfully complete Area Net Control Station training conducted by the ATM and AVNM after successfully completing initial training and been issued AF Form 3661 by the AMD removing the "/T" designation from the trainee's call sign prior to certification by the ATM and AVNM as Net Control Station.

2.5.3. Trainees may participate in real world or exercise situations, only if they have participated in several formal training sessions.

CHAPTER 3 PARTICIPATION, REPORTING, and LOGGING

3.1. This chapter provides guidance in reporting participation time of MARS members. In addition guidance into completing their station logs. Information in this MOI is exempt from a Reports Control Symbol.

3.2. In order to provide an accurate data base for management of the MARS system, individual member activity must be recorded. Member activity can be documented from many areas of MARS support. This MOI identifies activities to which participation time may be credited and establishes participation reporting procedures.

3.3. As established by the Joint MARS Chiefs' Panel, a minimum of 12 hours participation per calendar quarter on an established HF radio net is required, with six (6) hours being logged in the member's primary net assignment. Each member's goal should be to devote one hour each week to the program. Each individual affiliate member is responsible for ensuring his/her participation time is accurately recorded. All SMDs, RMDs, and SNMs will ensure all participation time is credited and forwarded to the appropriate agency. Members who wish to verify hours of participation credited to them can receive this info from their SMD.

3.3.1. In addition to the 12 hours of operating time, it is desirable that each member draft and send at least 2 properly formatted messages. Of the 2 messages, one must be sent to the Region Training Manager or any other region official upon request by the Area Training Manager. Due to the responsibilities instilled upon the AMD/RMD, no practice messages will be sent to the AMD/RMD.

3.3.1.1. The message may be official or exercise traffic in nature. Exercise traffic must, contain the word "EXERCISE EXERCISE" at the beginning and end of the body of the text.

3.3.1.2. The message can be sent over any authorized USAF MARS HF or VHF operating mode. Internet e-mail is not to be used to send the practice messages.

3.4. Six (6) of the twelve (12) hours must be in-station operations, on the net of primary assignment. The member's assignment may be to any regularly scheduled HF net or Base Support Team (BST) by AF Form 3661 action. Members may accrue additional participation time in any of the following areas:

3.4.1. Operation on Transcon, Region or State voice nets.

3.4.1.1. Each NCS will maintain a list of stations (including the check-in and check-out times) having checked into the established net it controls.

3.4.1.2. Participation time will be credited for each affiliate station with actual time on the air for each net. For example, AFA3YS checks in at 0100Z and checks out at 0145Z. Total participation time for that affiliate's station is 45 minutes; or, AFA5HR is able to check into three separate nets, and does so at 1120Z. He stops operating at 1200Z. Total participation time for

this member would still be only 40 minutes (not one hour and twenty minutes because of multiple net operations).

3.4.1.3. Participation credit will be given to stations that have full transmitting and receiving capabilities, and are on the air during net operations. Monitoring only cannot be counted as affiliate participation

3.4.2. Operation on the data network (BBS).

3.4.2.1. Individual stations and SYSOPS are required to maintain participation time for BBS operation.

3.4.2.2. Each BBS in full time 7/24 operation will be accredited one hour of operating time per day of operation within a quarter for each frequency of operation. For example, a BBS scanning three frequencies would be credited 3 hours per day.

3.4.2.3. Each BBS in part time daily operation regardless of software or mode will be eligible for one half hour of operating time per day of operation.

3.4.2.4. In the event of an emergency or exercise which would require a part time BBS to operate 7/24, time accounting for this period would be the same as a full service BBS.

3.4.2.5. Serial/slip link, telephone modem, and automated traffic forwarding does not account for time credit.

3.4.2.6. SYSOPs of the TRANSCON Data Network will credit each PBBS or Keyboard Operator with 30 minutes time for each connect to his/her system checking for traffic.

3.4.2.7. Affiliate stations will receive one hour for each piece of traffic originated or transferred from voice nets and placed into the Data Network, but not for messages relayed from a digital mode.

3.4.3. Operation on the National phone patch net.

3.4.4. Affiliates with official appointments may count their time spent on the off-air aspects of their positions.

3.4.5. Other MARS Networks.

3.4.5.1. Operation on nets of Army or Navy-Marine Corps MARS (see Chapter 16). This will not count toward minimum quarterly requirement.

3.4.6 Work on MARS special projects assigned by the Technical Services Manager, RMD, or SMD.

3.4.7. Support of actual or training emergency/contingency operations.

3.4.8. Attendance at an annual region MARS conference.

3.4.8.1. Affiliates attending region conferences are entitled to full participation credit for one quarter. The member may choose the quarter he/she wishes to apply the credit up to one year after the conference. It is the member's responsibility to inform their respective SMD who will inform the RRM of the specific quarter to apply this time. The time may not be split; it must be credited to one quarter only.

3.4.9. Operation on ALE nets.

3.4.10. NCS SHARES, with appropriate authorization, after the six hour primary requirement is met.

3.5. AMDs may grant or approve waivers to participation time requirements, based on special considerations and full justification (i.e. nursing home residents, etc.). This authority must be used judiciously. SMDs are empowered to approve inactive status not to exceed six months when waivers of HF are not in the program's best interest. The AMD and RMD will be sent an info copy of all actions by an SMD.

3.6. Each affiliate will be given credit for station activity on only one voice net at a time, regardless of how many nets they have simultaneously entered. In other words, four hours of operation on three separate nets does not equal 12 hours total. The member receives only four hours participation credit time (credited to only one of the nets being operated on). This is not meant to dissuade MARS affiliates from operating on more than one net at a time, but is designed to keep monthly participation times at realistic figures.

3.7. Reporting Procedure.

3.7.1. Special net managers will certify and report participation time for members. This report will be submitted to the respective NRM, AMD, ARM, RMD, RR and SMD.

3.7.1.1. NCS members of the Phone Patch Net, TRANSCON Voice, ALE, and BBS Sysops, will report participation time(s) for their nets to the Special Net Manager.

3.7.2. VHF voice net time will be submitted by the local VHF net manager directly to the SMD, who will forward the report to the ARM, and RRM.

3.7.3. NCS Reports will consist of:

3.7.3.1. BBS

3.7.3.1.1. REPORT 1: SYSOP operating time, number of traffic messages passed, traffic destined for, and Region Users of his/her system excluding other Full Service systems operating within his/her region.

- 3.7.3.1.2. REPORT 2: Total of BBS systems as reported within the region.
- 3.7.3.1.3. REPORT 3: Time for out-of-region members.
- 3.7.3.2. Voice (TRANSCON, Region, State, Phone Patch)
 - 3.7.3.2.1. Total number of hours logged in by each station. .
 - 3.7.3.2.2. Total number of traffic messages passed by each station (separate actual from practice/exercise messages).
 - 3.7.3.2.3. Traffic destined for (not required for practice/exercise messages)
- 3.7.4. ARMs and RRM's will submit a compiled quarterly report of all region activities to USAF MARS within twenty (20) working days of end of quarter (1 Jan, 1 Apr, 1 Jul, 1 Oct).
 - 3.7.4.1. List of members and their participation hours (HF, VHF, station maintenance, hours spent performing official duties, etc)
 - 3.7.4.2. The number of traffic messages passed (both actual and practice/exercise).
 - 3.7.4.3. A summary of the traffic being passed (both actual and practice/exercise).
 - 3.7.4.4. Exercises/Actual events where AF MARS played a part.
 - 3.7.4.5. Public recognition of MARS.
 - 3.7.4.6. Status of projects as assigned by RMD, SMD, or any other region official.
 - 3.7.4.7. Status on the new MARS trainees.
 - 3.7.4.8. Names and Call signs of Affiliates who have left, joined, or have become silent keys from the USAF MARS Program.
- 3.7.5. Affiliates operating on nets outside their home region, or on nets belonging to other branches of MARS, must keep track of their time themselves and report this monthly and then summarize this information on a quarterly basis to their SMD for credit. Affiliates traveling outside their home region may check into any local MARS net they wish (except restricted special nets, and nets of other service branches with their own restrictions), the thought being that a station provides a useful service more related to where it is located at the time rather than where the call sign is registered. But participation logging is up to the affiliate in those cases.
- 3.7.6 Affiliates may enter any regular Area/Region Voice Net that they can copy/be copied, when unable to access their assigned net, due to propagation. The net time will be credited towards their primary assignment participation.

3.7.7. Area net NCSs report station participation to the AVNM, who then reports quarterly to the ARM.

3.8. All MARS affiliate members will maintain a log of the events of their station. All logs are subjected to be reviewed by the USAF MARS office upon request.

3.8.1. Station Logs will include the minimum:

Note: More information may be required in the station logs; this is based upon the position being held. See other chapters of this MOI.

3.8.1.1. Date and Time logged on and off the net.

3.8.1.2. Subject of traffic messages.

3.8.1.3. Whom the traffic message is destined for, where it is coming from.

3.8.1.4. Any other significant events that occurred during station operation.

3.8.1.5. Net Designator.

CHAPTER 4 PERSONNEL ACTIONS

4.1. Like any military organization, MARS has a system of assigning affiliate members to various nets and positions of responsibility. The system also provides for documentation of authorized inactivity and termination of membership. AF Form 3661 is employed to document these MARS personnel actions.

4.2. Any appointed official (National, Area, Regional, or State) may be removed from office by the person whom they were appointed by (or from the Chief, USAF MARS) for:

4.2.1. Failure to fulfill the duties and responsibilities of the position.

4.2.2. Failure to comply with instructions furnished by the USAF MARS office.

4.2.3. Any action determined by the appointing authority to be detrimental to the USAF MARS program.

4.3. Resignation from any position may be submitted at any time without prejudice.

4.4. Affiliate members may be terminated for:

4.4.1. Bringing discredit upon themselves or MARS:

4.4.2. Failure to abide by the publications and rules governing MARS.

4.4.3. Failure to complete required MARS training.

4.4.4. Failure to maintain minimum quarterly participation on established MARS radio nets as instructed by published management guidelines.

4.4.5. Failure to maintain a current FCC amateur radio license.

4.4.6. Failure to notify appropriate authorities of a change of address.

4.4.7. Repeated infractions caused from improper radio operations.

4.5. Table 4.1 shows the MARS officials authorized to prepare AF Form 3661, the situations under which they are required to be initiated, and the authorized approving officials. All AF Forms 3661 must be completed IAW with this table.

4.5.1. When a member successfully completes the required training, the Region Training Manager will notify the AMD, RMD and the respective SMD. The AMD will complete the process set forth in 2.3.5. of this MOI. Except as otherwise provided in this MOI, after the above action, the SMD will initiate and sign all AF Form 3661 on the individuals in that state, except for terminations. Resignations, deaths, and transfers, may be initiated and signed by the SMD

who will forward a copy to Chief, USAF MARS and the AMD, RMD for distribution. Only the Chief, USAF MARS will sign AF Form 3661 terminating a member for cause. Any member canceled may appeal to Chief, USAF MARS for reinstatement.

4.5.2. All AMD's, RMDs, SMDs, and SNMs are authorized to originate AF Form 3661 involving affiliate members. AMD and RMD level authority for originating and authenticating AF Form 3661 will only be used to preclude unreasonable delays in processing member assignments. Computer generated substitutes for AF Form 3661 as authorized are acceptable, but must include all required data.

4.5.3. Members who are terminated from the USAF MARS program will not be allowed to rejoin USAF MARS for a period of two years. Members who resign must wait one year before re-applying for membership. (Waiting period may be waived for members resigning specifically to transfer to another service's MARS program.) Members who are in training status ("T" calls), who have exceeded their training dates will also be terminated. Reinstatement rights are the same as those for other terminated members. Members terminated for extreme cause (for example, unbecoming conduct) must wait a minimum of 5 years before requesting reinstatement in any of the military services' MARS programs.

4.5.4. SMDs are not allowed to grant inactive status for members for more than six (6) months for any reason. The AMD must approve extension to the training period. Extensions must be approved by the AMD upon advice of the RMD. Military personnel departing on official orders (PCS) overseas will be granted indefinite inactive status but must reinstate within 90 days of return from overseas or may be permanently terminated. These members will be referred to the AMD along with a copy of PCS orders for proper action.

4.5.5. SMDs will initiate all AF Form 3661 actions for terminations, resignations, and silent keys. The SMD will sign all of the foregoing actions except terminations for cause, which must be forwarded to the Chief USAF MARS for signature.

Table 4.1 AF Form 3661 Actions

If Action pertains to	Form initiated by	Form signed by	Copies	Distributed to
Appointment of AMD, RMD or SMD	Chief	Chief	5	Chief, AMD, RMD, SMD, Individual
Appointment of National Managers	Chief	Chief	5	Chief, AMD, RMD, SMD, Individual
Appointment of Special Assistants and other key non-region/state official	Chief	Chief	5	Chief, AMD, RMD, SMD, Individual
Appointment of area staff officials other than AMD	AMD	AMD	5	Chief, AMD, RMD, SMD, Individual
Appointment of region staff officials other than RMD	RMD	RMD	5	Chief, AMD, RMD, SMD, Individual
Digital Net Assignments (Primary Assignments)	Net manager	Net Manager	6	Chief, AMD, RMD, SMD, Individual, Net Manager
VHF, Area HF (Primary Assignments, other than initial Area Voice Net Primary Assignment upon successful completion of training)	SMD	SMD	6	Chief, AMD, RMD, SMD, Individual, Net mgrs
Phone Patch Net Assignment (Primary Assignment)	Net manager	Net manager	6	Chief, AMD, RMD, SMD, Net Manager, Individual
Initial HF Voice Net Assignment upon successful completion of training. (Primary Assignment)	AMD	AMD	6	Chief, AMD, RMD, SMD, Net Manager, Individual
Appointment of MARS Member Volunteer Official/State Level (Secondary Assignment)	SMD	SMD	5	Chief, AMD, RMD, SMD, Individual
Appointment of Base Support team Leader or Member (Primary or Secondary)	IMD	SMD	6	Chief, AMD, RMD, SMD, BST Leader, Individual
Inactive Member (PCS, Illness, Equipment Failure, etc.)	SMD	SMD	6	Chief, AMD, RMD, SMD, Individual, RRM
Cancellation of Net Assignments (Primary Assignments)	SMD	Chief	6	Chief, AMD, RMD, SMD, Individual, RRM
Termination from a region due to a move	SMD	SMD	7	Chief, AMD, RMD, SMD, Individual, New SMD, RRM

4.6. Maintenance of Records. SMDs will insure a copy of each AF Form 3661 pertinent to a member is in the member's personnel file, and that a current AF Form 3661 is on hand for each member.

4.7. Chief, USAF MARS may grant termination waivers of affiliates for extenuating circumstances on a case-by-case basis.

4.7.1. Grants periods of inactive status to MARS affiliates on a case-by-case basis.

4.7.2. Establishes procedures for MARS affiliates to access the government telephone systems.

CHAPTER 5 CORRESPONDENCE

5.1. It is every member's responsibility to use proper channels for corresponding with USAF MARS. When an item is generated, it should be processed in the swiftest manner available.

5.2. Written correspondence generated by an affiliate member to solicit a response from the USAF MARS staff, depending on the subject matter, will be sent to the next person in the affiliate channel. As the correspondence progresses, each recipient will either add statements to the material or endorse it prior to forwarding. This can be done by adding onto the bottom of the correspondence, or by drafting a letter to be attached to the original document. If an attached letter is used, it will not be removed before reaching USAF MARS. If no comments are necessary, an endorsement will still be needed to signify concurrence or non-concurrence with the correspondence. Likewise, responses prepared by the USAF MARS staff will be returned direct to the originator with info copies provided for each intermediary.

5.2.1. The following are the only provisions by which the proper channels may be bypassed when communicating with USAF MARS.

5.2.2. When information in the correspondence is such that minimal delays will adversely affect the mission being performed.

5.2.3. When the information being conveyed reflects unfavorably upon anyone in the proper channel, or is of a personal or sensitive nature.

5.3. To alleviate excessive delays and expense it is recommended that information be sent on-the-air whenever possible, or by internet email. However, on-the-air discussions will not adversely reflect upon another MARS member or bring discredit upon the MARS program. If the situation warrants written correspondence, the same rules stated above will apply. This information will go up through channels to whatever level is necessary for it to be resolved, or moved laterally within channels. In any case, an info copy will go to the SMD or RMD, as appropriate.

5.4. All mail forwarded by affiliates via US mail will bear the return address of the sender (by USPS regulation). A slant bar (/) and the affiliate's call sign will be included on the first line of the return address.

CHAPTER 6 MESSAGES FORMAT AND PROCEDURES

6.1. Each message sent by MARS must meet certain administrative requirements as well as satisfy the rules established by international, national, and service (Morale messages originating in the CONUS are not to be mailed at government expense).

6.2. Individual MARS stations preparing traffic for entry, and/or stations receiving messages (phone call or written matter) from a MARS user or message originator for introduction into the MARS system must use good judgment, common sense, and the guidelines contained herein relevant to creation and/or acceptance of messages for transmission via the MARS system. Each station should endeavor to receive and transmit (or relay, as needed) any message passed to it within a 24 hour time limit. This criteria is not only reasonable, but will prevent any unwarranted delays in the handling of MARS traffic, especially messages that are time sensitive. Numerous avenues are available to enable station compliance with this directive. The use of internet e-mail to send messages or broadcast is discouraged.

6.3. For message preparation see the AF MARS Training Manual.

6.4. Acceptance of messages for transmission over the MARS network is a responsibility that should not to be taken lightly. The operator receiving traffic for injection into the MARS system bears certain responsibilities relative to that action. Foremost of these is the in-station 24 hour handling time limit. Once a message that shouldn't be transmitted via MARS is accepted and sent anyway, it is an error on the part of the originating station. Once the message is accepted into the system, it must continue to flow until it reaches its destination or after sufficient attempts have failed; it is determined to be undeliverable. Therefore, the originating station operator is the individual who must utilize good judgment and the guidelines presented herein relative to acceptance of messages.

6.4.1.1. The following categories of messages will not be accepted for transmission via the MARS network:

6.4.1.2. Initial notification of death. Unless specifically addressed to the Red Cross, the Chaplain Service, or Commander, First Sergeant, etc initial notifications of death are not accepted.

6.4.1.3. Messages in a foreign language. (Exception: Stations with overseas and overseas-to-CONUS operations may use languages other than English on MARS nets under certain conditions. The MARS station must get host-country approval before using another language. The Chief, USAF MARS and the overseas unit station wall maintain a file copy of this concurrence. At least one of the operators handling the traffic must be conversant in the language used. Otherwise, only individual words are allowed if they're commonly used and understood. E.g. a message shouldn't be refused because the sender ends it with an "Adios".)

6.4.1.4. Nonsensical or whimsical messages.

- 6.4.1.5. Obscene, derogatory, or demeaning messages.
 - 6.4.1.6. Messages bearing precedence higher than "Priority" (Exception: Military stations).
 - 6.4.1.7. Business transactions (messages to mail order houses, banks, or to business firms requesting a product or service).
 - 6.4.1.8. Classified, For Official Use Only (FOUO) or Sensitive But Unclassified (SBU) information.
 - 6.4.1.9. Official traffic, regardless of the mode used, will not be entered into amateur nets for further transmission or relay for any reason.
 - 6.4.1.10. Personal messages originated in the CONUS for CONUS delivery may be re-filed into the amateur system or serviced back to originator as undeliverable.
- 6.4.2. Refusal to accept a message must be accomplished in a tactful and courteous manner. The offer must be made to help the originator rewrite the message so it still conveys the writer's thoughts but satisfies the guidelines established in this MOI. If the sender is displeased and wishes to address this problem to a higher authority, he/ she should be advised to contact the USAF MARS office in writing, outlining his/her grievance.
- 6.4.3. Purifying the system of unauthorized messages: Messages that do not satisfy the acceptance criteria contained herein sometimes get into the system and are recognized by subsequent station operators as being in conflict with this MOI's provisions. The first relay station receiving such a message should accept it and request guidance from the NCS prior to relaying further. If guidance is still needed, contact the AMD or as appropriate the RMD by phone for additional guidance and advice on message routing and disposition. In no case, once traffic is in the system, will it be refused by an operator. This paragraph addresses the procedure for insuring control of erroneous or unauthorized messages after they have entered the MARS system.
- 6.4.4. Messages with minor but obvious errors should be serviced back to the originating station for corrections. However, if there are time constraints with the message, an operator's note may be used following the message to indicate that either the groups do not check or that a probable error exists. An operator's judgment comes into play here, but servicing the message should always be considered first.
- 6.5. For the purposes of reporting certain events and situations Essential Elements of Information (EEI) messages will be used. EEI messages are the one of the most useful services provided by MARS for the Director Of Military Support (DOMS) in Washington, DC. Refer to the AF MARS Emergency Communications Plan 2005-1, Dated 17 October 2005 on how to draft EEI messages.

CHAPTER 7 CONFERENCES AND MEETINGS

7.1. MARS conferences and meetings are vital to the MARS program. They afford individual members and military/affiliate managers an opportunity to exchange information, discuss procedures, and clarify policy.

7.1.1. Each region may schedule an annual MARS conference convened by the respective AMD and/or RMD. The participants will be affiliate members and appointed region/state officials. Area and/or region conferences are funded primarily by the affiliate members. A registration fee may be charged to help defray conference costs (military are not exempt). When a registration fee is charged, it will be computed to cover only the costs of conference facilities, refreshments, and other incidentals, without making a profit. Excess funds will be returned to the members in a form determined by the conference committee and AMD or as appropriate RMD.

7.1.2. State MARS directors may hold periodic meetings with their members. State meetings held in cities where it is not practical for the SMD to attend must be coordinated with the SMD to insure current information is obtained. Members are responsible for any expenses.

7.2. Conferences and meetings should be well planned. The number of attendees should be determined far enough in advance to find a suitable facility. The AMD or RMD (if a region meeting) will appoint a conference committee who will work out the details for the affiliate region conferences. A definite agenda is required so the proceedings will be effectively conducted.

7.2.1. Area and Region conferences are scheduled for a three day weekend (Friday through Sunday.). An officials meeting chaired by the RMD may be scheduled for Friday evening.

7.2.2. A conference committee shall consist of (as a minimum) a conference chairperson, treasurer, recorder, and publicity manager. These personnel, appointed by the individuals convening the conference, are responsible for all conference administrative details.

7.3. Items for discussion should be solicited from the general membership through management channels. Selected subjects will be listed with a brief background and recommendation (as a basis for discussion). Each item will be listed on the conference schedule with an assigned time limit. The conference schedule should begin with opening remarks and pertinent introductions by the convening authority, followed by reports from appropriate officials. USAF MARS presentation should be scheduled to allow sufficient time for any questions and answers. The remainder of the schedule will consist of agenda items. If time permits, seminars on special presentations may be scheduled. A social, such as a banquet or dinner, may be incorporated, with expenses borne by attendees. Each conference agenda will be coordinated with the Chief, USAF MARS.

7.4. Conference events will be controlled by the conference chairperson. If agenda items are covered well and kept within their allotted time, the conference will run smoothly. Appropriate

recognition, such as certificates, plaques, and/or other awards, will be presented at the banquet/dinner, if scheduled. Otherwise, they may be presented at an appropriate time during the conference.

7.5. MARS meetings are conducted more informally than a conference. However, meetings should be planned with an outline for discussion. Current information should be obtained from the SMD or IMD for dissemination to members. Awards may be presented with the concurrence of the SMD or IMD, as appropriate. Full quarter participation time will be credited for region conference attendees. Three (3) hours of participation time will be given for local/state meetings.

CHAPTER 8 HF VOICE NETWORK

8.1 To establish a uniform process for the operation of the voice AREA, REGIONAL, and TRANSCON networks for the support of MAJCOM contingency plans.

8.1.1. The TRANSCON voice network covers the 48 contiguous states, and is the backbone of the MARS HF radio system into which all other MARS nets may enter. It is used to forward traffic throughout each of the USAF MARS Regions

8.1.2. Area and Region networks are nets serving the respective states and military installations within specified boundaries. Each USAF MARS Area has a separate net. They provide intra-area/regional HF radio communications support.

8.2. Standard radiotelephone training is contained in the AF MARS Training Manual.

8.2.1. Stations having inter-regional traffic will call the TRANSCON NCS and list the traffic by number and precedence. NCS will then acknowledge each station's check in and record the traffic. Every effort will be made by the NCS to handle the traffic as rapidly as possible. NCS will also query the net hourly at a randomly scheduled roll call, allowing stations the chance to mass any traffic they're holding. When a station checks into the net, it will respond to radio checks at certain times (on the hour and half hour, unless traffic is being passed), or until that station requests to close.

8.2.2. To expedite the flow of traffic, all messages will be passed on a frequency designated by the NCS.

8.2.3. Traffic handling will be done by the joint precedence system. Official traffic is to be processed ahead of non-official messages. If the net is busy, stations indicating they are ready to handle listed traffic will be directed to an adjacent (traffic) frequency by the NCS. Following completion of these stations, traffic passing they will report back on the calling frequency.

8.3. The NCS will open the net each day. He/She will keep a record of each station checking in, showing its location (should assistance be needed). When is traffic listed, the NCS will designate stations to receive the messages. NCS will poll stations to list traffic at least once each hour during a designated roll call. Every effort will be made to handle traffic as expeditiously as possible.

8.4. All USAF MARS stations will contact the NCS to check in/out of the net. If the NCS does not respond, other USAF MARS stations already checked into the net will relay the request at the next possible time.

8.5. Each Area or Regional NCS will be responsible to forward MARS participation time to their respective Area or Region Voice Network Manager.

8.6. Each TRANSCON NCS will be responsible to forward MARS participation time to the NVNM.

8.7. The National Voice Network Manager will consolidate all reports from the TRANSCON NCSs and forward the reports to the respective ARM and RRM .

8.8. Any recent MARS broadcast messages will be transmitted by the NCS or another designated station on Transcon or region frequencies at least once per week per net session.

CHAPTER 9 PHONE PATCH NETWORK

9.1. The phone patch network provides pilots and aircrews in flight a chance to make an official phone patch via an authorized USAF MARS phone patch station.

9.2. MARS phone patch networks are closed nets requiring specific assignment AF Form 3661 action. Assignment to these networks will be made by the National Phone Patch Manager in response to an affiliate's phone patch net application from their SMD. The member's SMD then coordinates the member's acceptance to the net with the phone patch manager.

9.3. There are special requirements which each affiliate station must meet prior to being assigned to a phone patch network.

9.3.1. Be capable of operating on assigned network frequencies.

9.3.2. Have RF output power and antennas capable of phone patch operations. Normally a one kilowatt amplifier and a directional antenna are desired.

9.3.3. Be willing to dedicate time in excess of the minimum MARS activity requirement.

9.4. Checking into or out of a net will be accomplished only when the circuit is free of traffic being passed. The station checking in/out will call the NCS. If the NCS does not respond, stations already checked into the net will relay the request at the next possible time.

9.5. To the greatest extent possible, phone patches will be rotated among stations that are operating on the net. Maximum participation by all net members is desired to enhance training and their ability to respond in times of emergency. To this end, all stations should have equal access in handling the available traffic.

9.6. Phone patch net participation will be reported quarterly. NCS will forward all MARS station participation time to the National Phone Patch Manager for consolidation. The National Phone Patch Manager will then forward the participation report to the respective ARM/RRM

9.7. The USAF MARS operator on each end of the circuit is responsible for proper operation of the phone patch. Specific procedures are as follows:

9.7.1. Most phone patches are made by reversing the charges (i.e. collect). Occasionally the calling party may request billing to a third party or credit card. While these are allowed, operators are cautioned to maintain an accurate log. A log will assist in answering any questions that may arise about payment of long distance charges. Often, a commercial long distance service, (Sprint, MCI, etc.) may prepay for phone patches during selected periods. The phone patch manager will provide necessary information for this service to his/her net members. Telephone access info from the net manager must be treated as close-hold (non-releasable) information, since illegal or unauthorized use of it could result in the loss of this free service. The bottom line is: while USAF MARS provides free morale/welfare calls, this 'free' service

refers to the part of the call that is transmitted over the radio. At no time will the cost of a morale/welfare phone call be charged to the USAF MARS Office or the government.

9.7.2. Instruction on phone patch procedures is usually required before the patch can be initiated. The called party will be advised in the use of the proword "OVER" and the circuit's unclassified status. Unless specified by the net manager or NCS, operators should brief the calling and called parties that the circuit is not secure and not to discuss items of a classified nature. They should be told that only one person can talk at a time, and that the phone patch will be limited in time.

9.7.3. Only prowords and abbreviations authorized for USAF MARS may be used. Those developed in other services/systems (e.g. Citizens Band, Amateur Radio Relay League (ARRL), etc.) are not authorized. When approved prowords don't exist to express an action/function, plain English will be used (e.g. 'no answer' is acceptable, while 'DNA' is not).

9.7.4. Phone patches are normally limited to five minutes. Operators may extend this time limit, depending on circuit traffic load and/or importance of the call. Responsibility for enforcing the time limit rests with the initiating station.

9.7.5. A phone patch usually follows the sequence given below. Slight deviations may occur depending on the specific circumstances of the patch.

9.7.5.1. The initiating station will list the patch with the NCS. Several patches may be listed at one time to expedite operations.

9.7.5.2. When it is the initiating station's turn, the NCS will advise the initiator to conduct their patch(es) with the other station.

9.7.5.3. The initiating station will call the receiving station and conduct a signal check. If patch quality exists in both directions, the patch will be conducted.

9.7.5.4. Completion of the patch will be reported to the NCS.

NOTE: The NCS will process phone patch traffic on a basis of precedence (i.e. Immediate, Priority, and Routine). Messages of the same precedence will be processed on a first-in, first-out basis (this depends on availability of other net member stations also).

9.8. Affiliate stations will log all phone patch operations. In addition to other MARS logging requirements, the phone patch log will contain the following information:

9.8.1. Station call sign.

9.8.2. Name of person for whom the patch was performed and who was called.

9.8.3. Phone number called and phone number/credit card number of the caller (if billing will be to other than the number called).

9.8.4. Specific information about the patch (what the patch was for).

9.8.5. Date, start time (ZULU), end time (ZULU) and frequency of the patch.

9.8.6. Any additional data as determined.

9.9. Discussion of classified information during a MARS phone patch is not authorized. MARS operators are not expected to determine the classified nature of phone patch conversations and will not terminate patches when suspected violations occur. They should bring the information to the attention of the NCS. To preclude occurrences of this nature, the initiating and receiving parties will be briefed on the insecurity of USAF MARS phone patch circuits prior to the patch being initiated.

CHAPTER 10
EMERGENCY COMMUNICATIONS SUPPORT

10.1. The purpose is to establish emergency communications support procedures, assure coordination of USAF MARS operations with military or civil Disaster Response Forces.

10.2. The USAF MARS Emergency Communications (ECOM) Plan 2005-1, dated 17 Oct 2005 was developed to outline the utilization of USAF MARS in support of the Disaster Response Forces. It also provides specific actions for USAF MARS stations to take in support of disaster response communications requirements.

10.3. For a copy of the ECOM plan contact the respective Area, Region, or National ECOM Manager, or the USAF MARS Office.

CHAPTER 11 NET CONTINUITY CHECKS

11.1. It is essential that NCS operators know which participating stations are available when a traffic/contingency net is in progress. Periodic continuity checks reveal that the NCS and net participants have contact established with one another, or that propagation conditions or equipment problems have made contact between them unreliable or nonexistent. The lack of a useful radio path will normally lead to a frequency change or an outage entry in the radio log. In VHF operation, propagation variables are not usually major problems. However, many participating VHF net stations are mobile or transportable, and are sometimes either shielded for a time by terrain, foliage, or man-made obstructions; or they move outside repeater or net stations' coverage range. This may cause temporary loss of contact with other net stations. These factors make it necessary that some method be employed to determine if HF and VHF net stations are available to accept traffic, or respond to contingency instructions during certain defined net operation periods.

11.2. A continuity check will be conducted at random times hourly during net operations selected by NCS. The reason for making the check at a random time is so that station operators cannot leave their radio between checks and still claim participation credit for the entire session. If traffic is in progress at the scheduled check time the check will be conducted immediately after traffic passing is completed. If traffic load is heavy, a continuity check at that particular time may be preempted at the NCS' discretion. However, precluding emergencies or traffic priority, a minimum of one continuity check (and polling of stations to list traffic) will be made each hour. This will ascertain the quality of all stations on the net, and allow the NCS to know which stations have traffic to pass.

11.3. All MARS nets will be logged, showing each affiliate station that has checked into the net, their location (HF = State and ZIP, VHF = ZIP, time checking into the net, time checking out of the net, and any traffic they may have. All net continuity checks will also be logged.

11.4. The following operating procedures will be used when performing continuity checks:

11.4.1. The NCS advises all net stations that there will be a call and radio check. The NCS calls each station (one at a time) that has checked into the net. When called, each station responds by giving a signal report. The NCS acknowledges by responding with a signal report, and then calls the next station, etc. At the conclusion of the continuity checks, the NCS asks if there are stations to be recognized. If stations respond, he/she checks them in. If there is no response, the NCS will poll for any traffic to be listed.

11.4.2. If an affiliate station does not respond to a continuity check, the NCS will attempt contact the affiliate station at the end of call of the net roll. If there is still no response, the station will be shown on the radio log as closed. The participation time will cease when the affiliate's station is closed. If the station rejoins the net later, a new period of participation credit starts at that point.

11.5. Promptly, at the end of each net quarter, NCSs will formulate each member's participation time and forward it to the net manager for that net (i.e. AVNM), who will then, within ten (10) days after the end of each month, forward participation time for each member to the respective records manager and to the AMD, RMD and SMD for the member. .

CHAPTER 12 VHF NETWORK

12.1. USAF MARS has no requirement to develop extensive VHF voice or digital networks to pass traffic. Each VHF operator must possess the capability to operate on HF region nets (a DoD prime directive). VHF may be used for local MARS training, local traffic handling, local area emergency support, and to complement HF operations.

12.2. Affiliate VHF operations are under the purview of the SMD. On military installations where government equipment is installed, VHF operations will be controlled by the IMD. Linked and interstate repeaters and data network stations are managed by cooperation of the SMDs involved.

12.2.1. The SMD will provide a net designator prior to establishing a VHF voice net.

12.2.2. Each VHF voice net will have a net manager, appointed by the SMD. The SMD will certify the appointment on an AF Form 3661.

12.2.3. VHF voice net managers will maintain an accurate record of affiliate participation. Net member participation time(s) will be forwarded to the respective ARM/RRM.

12.2.4. VHF voice net managers will insure a NCS is designated for each net session.

12.2.5. VHF voice net NCS' will designate an HF equipped net member to perform as a liaison between the VHF net operating stations and the region HF traffic net.

12.2.6. The designated HF liaison station will advise the region HF NCS, he/she is liaison for the (net designator) VHF net, the VHF net's area of coverage, and whether or not they are currently in session.

12.3. Requests for repeater or digital repeater (digipeater) usage on VHF nets are processed by using a Repeater/Digipeater Application form, obtained from the USAF MARS Office (see note below). All requests must be submitted through the respective SMD, AMD and RMD who will forward them to USAF MARS. Applications must be completed in their entirety (include a map showing the location, and expected radius of coverage).

NOTE: Nodes may or may not be classified as digipeaters. However for simplicity within this MOI, when the term "digipeater" is discussed, "nodes" are included. The term "digipeater" used here is defined as any digital relay station without BBS functionality and where affiliates are not using the same equipment to connect to other digital stations.)

12.3.1. Applications for new repeaters or digipeater on military installations must be coordinated through the Installation Spectrum Manager and the appropriate MAJCOM Spectrum Manager before they are forwarded to the USAF MARS office for processing.

12.4. The USAF MARS office is the sole office for processing repeater/digipeaters applications to the Air Force Frequency Management Agency, (AFFMA) Washington, DC. Where possible frequency overlap exists, USAF MARS will direct and establish frequency/time-sharing arrangements or approve secondary-pair operation.

12.5. Repeater/Digipeater owners

12.5.1. Ensure the repeater operates within the constraints (power limitations, emission characteristics, etc.) of the frequency license, and this MOI.

12.5.2. Are responsible for the drafting and execution of a Memorandum of Agreement (MOA) between the repeater/digipeater owner and the facilities manager (and/or other designated individuals), if required. If a MOA is not required, the repeater/digipeaters owner is still responsible for the contents noted in the sub paragraph of paragraph 12.5.2. MOAs should include (but not limited to):

Note: Legal assistance is suggested when drafting an MOA.

12.5.2.1. Written coordination with the appropriate personnel to ensure the proposed repeater station will not impact other operations within area of the facility.

12.5.2.2. Who is responsible for the maintenance, procurement and cost associated with the repeater/digipeater and the facility? This also includes any cost that could be incurred from the facilities manager.

12.5.2.3. Who is responsible for the cost of any insurance or utility bills as required by the facilities manager?

12.5.2.4. Obtain approval to operate on USAF MARS frequencies prior to using the station.

12.5.2.7. A way of contacting the repeater/digipeater owner in case of problems.

12.5.3. Are responsible for finding an alternative location for the equipment if told to remove equipment. This includes the relocation of equipment on a military installation.

12.5.4. Coordinate with the facilities manager prior to installation of any equipment.

12.6. When a repeater/digipeater requirement no longer exists, the repeater manager will send a request for termination of registration to USAF MARS.

12.7. A VHF repeater station may consist of either a VHF repeater, digital repeater, linking control/interface equipment, or a combination of items. Radio frequencies, emission authorizations, and limitations relevant to each repeater station are assigned by USAF MARS as part of the station license.

12.8. All VHF operations will be frequency modulated (FM). If four (4) or fewer stations regularly check into a net, the SMD can take action to terminate the net. Affiliate member VHF net participation credit will be granted only when a region HF traffic net liaison station is operating during the VHF sessions. Repeaters may be temporally linked to pass traffic. The link will be deactivated after traffic passing is complete.

12.9. Army and Navy-Marine Corps MARS are authorized to share USAF VHF MARS resources under the following conditions:

12.9.1. For the express purpose of expediting delivery of MARS messages traffic when normal in-service means are not readily available.

12.9.2. Prior mutual agreements and coordination between Army, Air Force, Navy-Marine, state directors/coordinators, as appropriate.

12.9.3. Shared use of other services' repeaters will be on a non-interference basis (NIB).

12.10. See Chapter 13 regarding sending the identifying call sign for digipeaters.

12.11. The responsible party for a repeater/digipeater is the point of contact (POC) and is responsible to the SMD.

12.11.1 The SMD shall provide the above information to the RMD, who shall forward to the RVC and the AVC;

12.11.2 The AVC shall forward the information to the NVC who shall maintain a database of ALL VHF repeaters and digital repeaters.

12.11.3 The POC will also include input information, frequencies and modes. If the repeater is linked, then that information about all linking(s) will be included. If the digipeater is networked, then all ports in and out will be defined and included.

12.11.4 If VHF ports to internet email (such as but not limited to WL2K winlink.org, or, marsale.org, indicate these ports and any HF porting.

12.11.5 The POC is responsible to inform the NVC of all port networks from the assimilated information provided and questions, conflicts, complaints should be resolved at the lowest echelon possible.

12.12 The SMD is responsible for users accessing the voice and digital repeaters.

CHAPTER 13 CALL SIGNS

13.1. USAF MARS call signs are geographically derived, from a block of internationally recognized call signs allocated to the USAF by NTIA. The FCC manages the geographical call sign program for the US. Call signs coming from these national blocks were further portioned out, resulting in the call signs currently employed by the USAF MARS program.

13.2. The USAF MARS Office is responsible for and issues USAF MARS call signs. Call signs are derived from a number, 1 through 9, and 0, denoting the region where the station is located.

13.2.1. The following table shows the Regions and the States located within them.

Table 13.1 - Regions and States

Region	States
I - 1	CT, MA, ME, NH, RI, VT
II - 2	NJ, NY
III - 3	DE, MD (including DC), PA, VA, WV
IV - 4	AL, FL (including PR, VI), GA, KY, MS, NC, TN, SC
V - 5	IL, IN, MI, MN, OH, WI
VI - 6	AR, LA, NM, OK, TX
VII - 7	IA, KS, MO, NE
VIII - 8	CO, MT, ND, SD, WY, UT
IX - 9	AZ, CA, NV, HI, GU and Pacific Islands
X - 0	AK, ID, OR, WA

13.2.2. The following table shows the Areas and the Regions located within them.

Table 13.2 - Areas and Regions

Area	Regions
Northeast	Regions I, II, & III
Southeast	Region IV
North Central	Regions V & VII
South Central	Region VI
Northwest	Regions VIII & X
Southwest	Region IX

13.3. Military Unit Stations consist of the letters "AGA", followed by a number 1 through 9 and 0 denoting the region where they are located, followed by two alphabetic character normally associated with the letters of the station's name AGA1SP - South Portland ANG Base, ME; AGA4PA - Patrick AFB, FL). The first initial of each name in a dual named base is normally used (e.g. AGA9DM - Davis Monthan AFB, AZ). .

13.3.1. All Military Unit call signs are issued only by the Chief, USAF MARS. They are multi operator call signs, and request for them will be submitted through appropriate military channels to the Chief, USAF MARS.

13.4. The Chief, USAF MARS (AGA5C) is the only person on the USAF MARS Staff to receive a call sign.

13.5. Affiliate station call sign assignments are delegated to the AMD. These are single operator calls consisting of the letters "AFA", a number 0 through 9 for the respective region in which the affiliate is located, and finally, two letters "AA" through "ZZ." The two letter diagraphs of the USPS denoting states will not be used. Call signs with a "/T" (Slant-Tango) indicate that the Affiliate is in training to become a fully qualified USAF MARS Operator. The Slant-Tango ("/T") will be removed upon completion of the Area, Region or State Training program. Initial affiliate training must be completed within one-hundred (180) days of the issuance of AF Form 3661 by the AMD.

13.5.1. Other than training status changes to remove the "/T", the affiliate's designated call sign will not change unless the member moves to another MARS region.

13.6. All National billet call signs are issued by the Chief, USAF MARS. They are single operator call signs, and requests for them should be submitted through appropriate channels to the Chief, USAF MARS.

13.6.1. National Officials, Area MARS Directors, and Region MARS Directors will have the Call Sign Prefix "AFN," followed by the numeric designator for the region the person is located, followed by two letters "AA" through "ZZ" designating the specific appointment. (See Tables 13.3 and 13.4)

13.6.2 State MARS directors will have the Call Sign Prefix "AFF," followed by the numeric designator for the region where the person is located, followed by two letters "AA" to "ZZ" which represent the US Postal Service State Designator.

13.6.3. Deputies of National Managers or Coordinators, Deputy Area MARS Directors, Deputy Region MARS Directors, and Deputy State MARS Directors, will have the Call Sign Prefix "AFD," followed by the numeric designator for the region the person is located, followed by two letters "AA" through "ZZ" designating the specific appointment.

Table 13.3 - National Appointments

Call Sign	National Appointments	Issuing Authority
AFN#AA	National Administrative Assistant (NAA)	Chief AF MARS
AFN#AC	Reserved: National Automation Coordinator, Joint-MARS WL2K Network (NAC)	Chief AF MARS
AFN#AT	Reserved: National TRANSCON Automation (Pactor/BBS Network) Manager (NTAM)	Chief AF MARS
AFN#CW	National TRANSCON CW Manager (NCWM)	Chief AF MARS
AFN#DM	National Digital Networks Manager (NDNM)	Chief AF MARS
AFD#AC	Deputy Manager for Operations, Joint-MARS WinLink 2000 (WL2K) Radio Message Server (RMS) Network (DMO/WL2K)	National Digital Networks Manager
AFD#AT	Deputy Manager for Operations, TRANSCON Pactor Network (TPN) (DMO/TPN)	National Digital Networks Manager
AFD#RT	Deputy Manager for Operations, TRANSCON Digital Radio Relay Net (TRR) (DMO/TRR)	National Digital Networks Manager
AFN#EC	National Emergency Communications (ECOM) Coordinator (NEC)	Chief AF MARS
AFD#EC	Deputy National Emergency Communications (ECOM) Coordinator (D/NEC)	National ECOM Coordinator
AFN#LE	National ALE Manager (NALE)	Chief AF MARS
AFD#LE	Deputy National ALE Manager (D/NALE)	National ALE Manager
AFN#OO	National Operations Officer (NOO)	Chief AF MARS
AFN#PI	National Public Information Officer (NPIO)	Chief AF MARS
AFN#PP	National Phone Patch Manager (NPPM)	Chief AF MARS
AFD#PP	Deputy National Phone Patch Manager (D/PPM)	National Phone Patch Manager
AFN#RM	National Records Manager (NRM)	Chief AF MARS
AFN#RT	Reserved: National TRANSCON Digital Radio Relay Net (TRR)	Chief AF MARS
AFN#TD	National Training Director (NTD)	Chief AF MARS
AFD#TD	Deputy National Training Director (D/NTD)	National Training Manager
AFN#TS	National Technical Services Manager (NTSM)	Chief AF MARS
AFN#SN	National TRANSCON Space Support Net (TSN) Manager (TSNM)	Chief AF MARS
AFN#VC	National VHF (Repeater, Digital Network & Simplex Voice Operations) Coordinator (NVC)	Chief AF MARS
AFN#VN	National HF Voice Network Manager (NVM)	Chief AF MARS
AFD#VN	Deputy Manager for Operations, TRANSCON National HF Voice Net (DMO/NVN)	National HF Voice Net Manager
AFN#XC	National Exercise Coordinator (NXC)	Chief AF MARS

Table 13.4 - Area MARS Director, Region MARS Director, and Deputy Director Appointments

Call Sign	Area, Region, and State Director and Deputy Position Appointments	Approval Officer
AFN#NE	Northeast Area MARS Director	Chief AF MARS
AFD#NE	Deputy Northeast Area MARS Director	Northeast AMD
AFN#NC	North Central Area MARS Director	Chief AF MARS
AFD#NC	Deputy North Central Area MARS Director	North Central AMD
AFN#NW	Northwest Area MARS Director	Chief AF MARS
AFD#NW	Deputy Northwest Area MARS Director	Northwest AMD
AFN4SE	Southeast Area MARS Director	Chief AF MARS
AFD4SE	Deputy Southeast Area MARS Director	Southeast AMD
AFN6SC	South Central Area MARS Director	Chief AF MARS
AFD6SC	Deputy South Central Area MARS Director	South Central AMD
AFN9SW	Southwest Area MARS Director	Chief AF MARS
AFD9SW	Deputy Southwest Area MARS Director	Southwest AMD
AFN#RD	Region MARS Director	Chief AF MARS
AFD#RD	Deputy Region MARS Director	RMD
AFF#ss	State MARS Director (ss is the USPS Two Letter State Digraph)	AMD/RMD
AFD#ss	Deputy State MARS Director (ss is the USPS Two Letter State Digraph)	RMD
AFE#ss	State Emergency Communications Coordinator (SEC)	RMD/SMD

13.7. Except for Area MARS Directors (AMD) and Region MARS Directors (RMD), and their respective Deputies, Area Staff will have billet call signs consisting of "AFE", a region number indicating the region where they are located, and a two letter suffix for the staff position; and Region Staff will have billet call signs consisting of "AFF", a region number indicating which region they are located in, and a two letter suffix indicating the position they hold.

13.7.1. Area Staff Billet Call Sign Suffixes (AFE#xx) and Region Staff Billet Call Sign Suffixes (AFF#xx) will be based on the National Billet Call Sign Suffixes.

13.7.1.1. Authorized Area Staff and Billet Call Signs are shown in the following Table 13.5:

Table 13.5 - Area Staff Position Appointments

Call Sign	Area Staff Position Appointments	Approval Officer
AFE#AA	Area Administrative Assistant (AAA)	Area MARS Director
AFE#DM	Area Digital Networks Manager (ADNM)	Area MARS Director
AFE#EC	Area Emergency Communications (ECOM) Coordinator (AEC)	Area MARS Director
AFE#LE	Area Assistant ALE Coordinator (ALEC)	Area MARS Director
AFE#OO	Area Operations Officer (AOO)	Area MARS Director
AFE#PI	Area Public Information Officer (APIO)	Area MARS Director
AFE#RM	Area Records Manager (ARM)	Area MARS Director
AFE#TD	Area Training Director (ATD)	Area MARS Director
AFE#TS	Area Technical Services Manager (ATSM)	Area MARS Director
AFE#VC	Area VHF Repeater, Digital Network & Voice Operations Coordinator (AVC)	Area MARS Director
AFE#VN	Area HF Voice Network Manager (AVM)	Area MARS Director
AFE#WM	Area Webmaster (AWM)	Area MARS Director
AFE#XC	Area Exercise Coordinator (AXC)	Area MARS Director

13.7.1.2. Authorized Region Staff and Billet Call Signs are shown in the following Table 13.6:

Table 13.6 - Region Staff Position Appointments

Call Sign	Region Staff Position Appointments	Approval Officer
AFF#AA	Region Administrative Assistant (RAA)	Region MARS Director
AFF#DM	Region Digital Networks Manager (RDNM)	Region MARS Director
AFF#EC	Region Emergency Communications (ECOM) Coordinator (REC)	Region MARS Director
AFF#LE	Region Assistant ALE Coordinator (RLEC)	Region MARS Director
AFF#LO	Region Liaison Officer (RLO)	Region MARS Director
AFF#OO	Region Operations Officer (ROO)	Region MARS Director
AFF#PI	Region Public Information Officer (RPIO)	Region MARS Director
AFF#RM	Region Records Manager (RRM)	Region MARS Director
AFF#TD	Region Training Director (RTD)	Region MARS Director
AFF#TS	Region Technical Services Manager (RTSM)	Region MARS Director
AFF#VC	Region VHF Repeater, Digital Network & Voice Operations Coordinator (RVC)	Region MARS Director
AFF#VN	Region HF Voice Network Manager (RVM)	Region MARS Director
AFF#WM	Region Webmaster (RWM)	Region MARS Director
AFF#XC	Region Exercise Coordinator (RXC)	Region MARS Director

13.7.2. Special Call Signs for the TRANSCON Pactor Network Primary Message Center Stations and the USAF MARS WinLink2000 (WL2K) Radio Message Server (RMS) Network Stations are described in the following paragraphs and tables.

13.7.2.1. Call signs for stations of the TRANSCON Pactor Network Primary Message Center Stations consist of the prefix "AFB" for the **First Primary Message Center** in a given Region, or "AFC" for the **Second Primary Message Center in the same Region**, or "AFE" for the **Third Primary Message Center in the same Region**; a number from 1 to 9 and 0; and the suffix letters "MC". Additional Primary Message Center Stations will use their personal MARS Call Signs or a Call Sign approved by the Chief USAF MARS or his Designee. Local/Regional BBS Stations will use their personal MARS Call Signs. See Table 13.7.

Table 13.7 - TRANSCON Pactor Network Primary Message Center Stations

Call Sign	TRANSCON Pactor Network Primary Message Center Station Appointments	Approval Officer
AFB#MC	First National TRANSCON Pactor Network Primary Message Center in a Given Region	National Digital Networks Manager
AFC#MC	Second National TRANSCON Pactor Network Primary Message Center in the Same Region	National Digital Networks Manager
AFE#MC	Third National TRANSCON Pactor Network Primary Message Center in the Same Region	National Digital Networks Manager

13.7.2.2. Call signs for the USAF MARS Radio Message Server (RMS) Stations in the Joint-MARS WinLink2000 (WL2K) Network consist of the prefix "AFB" (**for the First RMS in a Given State**) or "AFC" (**for the Second RMS in the Same State**), or "AFT" (**for the Third RMS in the Same State**); a number from 1 to 9 and 0; and the two-letter USPS Digraph for the state where the RMS Stations is located. See Table 13.8.

Table 13.8 - USAF MARS Stations in the Joint-MARS WL2K RMS Network

Call Sign	Station Call Signs for AF MARS Radio Message Server (RMS) Stations in the Joint-MARS WL2K Emergency Communications Network	Approval Officer
AFB#ss	First RMS Station in a Given State (ss denotes the USPS Two-Letter State Digraph)	National Digital Networks Manager
AFC#ss	Second RMS Station in the Same State (ss denotes the USPS Two-Letter State Digraph)	National Digital Networks Manager
AFT#ss	Third RMS Station in the Same State (ss denotes the USPS Two-Letter State Digraph)	National Digital Networks Manager

13.8. National, Area, Regional, State official billet call signs remain with the position as assigned on their AF Form 3661.

13.9. Participation time in MARS may only be credited to the affiliate call sign, not the National, Area, Regional, or State billet call sign. All participation reports must reflect the participation in this manner.

13.10. MARS call signs will not be suffixed except as authorized in this MOI.

13.10.1. Military unit stations may use the suffix Unit 1, Unit 2, etc., to denote sub-unit stations of the parent organization.

13.10.2. Affiliate MARS stations will not use the suffixes "mobile" or "transportable" Use of these terms confuse many members and serves no real purpose. The term "Portable" is not recognized by the AFFMA in Washington, D.C., and will also not be used on MARS frequencies. This provision does not prevent an NCS to request certain station information such as whether the station is operating mobile, maritime, on a military base installation or operating using emergency power.

13.11. USAF MARS call signs will be used only on MARS networks unless the Affiliate Member is also a member of SHARES. Unless the operator is a SHARES National or Regional Net Control Station, USAF MARS SHARES members should operate on their designated SHARES Regional frequencies or other frequencies designated for BBS, Digital, or CW Operation..

13.12. USAF MARS call signs will not be used on other military networks except other MARS Services Nets where authorized to do so. Deployed Units of USAF MARS Military Base Stations may use suffixes where applicable. Whenever a transmission is made, the station making the transmission must be identified as the source.

13.14. The following chart is a listing of the current Secondary Station Identifiers (SSIDs) applies to packet stations. Changes regarding packet may be made upon approval from the National Digital Networks Manager.

SSID	Used by
-0	Standard keyboard operation from a MARS member's home station location.
-3	Authorized unattended digipeaters/nodes.
-4	Authorized VHF BBSs.
-15	Personal BBS such as those within a TNC that do not immediately store incoming messages on floppy or hard disk media. Third party or record traffic will not be auto-forwarded to this type of BBS due to message volatility.

13.14.1. All packet BBSs/digipeaters (simplex digital repeaters) should broadcast the call sign used to connect to and the location of the transmitter.

13.15. The use of Automatic Linking Establishment (ALE) identifiers must be used while operating ALE.

CHAPTER 14

AUTOMATED DIGITAL NETWORKS AND MANNED DIGITAL NETS

14.1. The TRANSCON Pactor Network (TPN)

14.1.1 To establish policy, technical standards, and procedures for use of digital radio modes to access automatic computer-based bulletin board systems (BBSs) arranged in a network. Automatic message storage and forwarding are already developed to facilitate error-free automated message handling without human operator intervention.

14.1.2. Radio data networks will be primarily utilized on USAF MARS HF frequencies to support the USAF MARS mission. VHF may be utilized to enhance the HF radio digital networks. The TRANSCON Pactor Network is an open network, and available to all Service MARS members (except to those in training), affiliate members, and to all Military unit stations. TPN operations are supervised by the National Digital Networks Manager and assisted by the Deputy Manager for Operations, TRANSCON Pactor Network.

14.1.3. A member interested in having his/her station become a part of the TRANSCON Pactor Network must be capable of operating and maintaining the required stability on designated USAF MARS frequencies and other frequencies as required. The candidate must be prepared to interface with other Area and Regional Networks in order to expeditiously move incoming traffic toward its destination in accordance with current MARS Operating Instructions. An application to participate in the network operation must be forwarded to the National Digital Networks Manager for approval and assignment.

14.1.4. TRANSCON Pactor Network stations shall consist of three categories: Primary Message Centers, Regional Message Centers, and Support Message Centers. All Message Centers are established by the National Digital Networks Manager and shall be geographically located throughout the CONUS and/or territories to provide optimum coverage.

14.1.4.1. The Primary Message Center's principal function is to provide for fast and efficient forwarding, storage, and distribution of traffic to destinations within their respective Regions, to other Primary Message Centers and BBS Stations, and to provide a gateway to other services in compliance with the interoperability agreement. Primary Message Centers shall be required to be operational and functions on a 24 hour per day (24/7) schedule. Primary Message Centers shall be capable of scanning or monitoring two or more of the designated Network frequencies.

14.1.4.2. The Regional/Local BBS Station's principal function is to provide for fast and efficient forwarding, storage, and distribution of traffic to destinations, and to other BBS Stations within their respective Regions; and to provide an alternate traffic routing path for Primary Message Centers, as required. Regional/Local BBS stations shall be required to be operational on a 24 hour per day basis (24/7) schedule. Regional and Local BBS Stations shall be capable of scanning or monitoring one or more of the designated Network frequencies. Individual Affiliate Call Signs are utilized for Region and Local BBS Station, therefore there is no limit as to number of Regional/Local BBS stations that may be located within a given Region.

14.1.4.3. Support Center's principal function is to establish relay traffic to and from individual members on an automated basis destined either within the region or out-of-region. Support Center's are not required to scan multiple frequencies but will be accommodated by schedule if needed, or by manual operation on a random basis at the SYSOPS discretion.

14.1.5. The National Digital Manager shall allocate and assign frequencies as equitably and efficiently as possible to optimize use within the National Digital Network. The frequency sharing plan will make use of one or more of the following methods:

14.1.5.1. Geographical sharing: Use of the same frequency in more than one geographical area.

14.1.5.2. Time sharing: Require that stations operate on a forwarding schedule.

14.1.6. Role of VHF/UHF Frequencies. VHF/UHF Packet BBS stations, Digipeaters, and Nodes may be employed and established by the Area or Regional Digital Modes Managers to provide support and to interface with the TRANSCON Pactor Network. When advantageous for reasons of geography, distance, and propagation, VHF/UHF links may operate across Area, Region or state lines with no special permission required beyond that of the relevant RMDs, and/or SMDs, provided such operation does not cross into another Area. Any VHF/UHF Links that also cross Area boundaries must also be approved by the respective AMD's. All VHF/UHF Linking BBS stations must also provide some type of connection to the National HF TRANSCON Pactor Network.

14.1.7. Several types of terminal software are available to USAF MARS operators. There is no prescribed software for the individual member, and no single program that universally suits every member.

14.1.7.1. All USAF MARS auto-forwarding systems must use software compatible with the other MARS services. Personal electronic mailboxes (non-disk based mailboxes such as those built into a TNC or Multimode Controller) are not to be used for traffic handling of any kind.

14.1.7.2. MSYS, WINLINK, AIRMAIL, FBBS and JNOS are types of software for Bulletin Boards and Mailboxes in current use within the National TRANSCON Pactor Network .

14.1.8. In order to preserve network integrity and afford network users appropriate routing information, all bulletin board systems must be registered with the National Digital Networks Manager. The National Digital Networks Manager will forward a list of registered BBSs Digipeaters and Nodes to the USAF MARS Office. Stand-alone Digipeaters are to be properly licensed through the USAF MARS Office (see Chapter 12). There is no special registration required for stations that merely connect to the BBS stations.

14.1.9. Each Systems Operator (SysOp) shall be expected to regularly check his/her BBS system to insure that traffic is flowing in an expeditious manner. The SysOp will be responsible for readdressing any traffic not being so forwarded. Traffic which is not forwarded promptly will be removed from the BBS and re-filed into a Voice or Manned Digital Net or other Network as applicable to that message's final destination. The time for a message to remain in-station

shall not exceed 24 hours, including the time required to re-file and retransmit on an alternate mode.

14.2. The TRANSCON Digital Net (TDN)

14.2.1. To establish policy for manned/attended keyboard-to-keyboard digital operations using software designed for Sound Cards on USAF MARS frequencies.

14.2.2. TDN operators shall use software which is designed for use with the Sound Cards and which is readily available for download from the internet and may be used by MARS members for sending record, official, semi-official, and training message traffic. The various digital modes created for use with Sound Cards allows the TDN to determine the best mode and frequency to enable the transfer of traffic under the most adverse conditions.

14.2.3. The TDN is a special net within the USAF MARS program open to all Military unit stations and Affiliate members of all MARS Services, except for those in training ("/T"). The scheduling of TDN frequencies and operations shall be determined and coordinated with the National Digital Networks Manager, the National HF Voice Manager, and their respective Deputy Net Managers.

14.2.4. The TRANSCON Digital Net is structured with a Net Manager, a Deputy Net Manager, and the Net Control Station Operators who direct the day-to-day operations of the TDN.

14.2.5. Due to the complexities of the software it is essential that the Net Manager, Deputy Net Manager, and the Net Control Station Operators be assigned to the TRANSCON Digital Net as their Primary Net Assignment; such assignment action would be made by AF Form 3661 personnel action by the National Digital Networks Manager.

14.3. The AFMARS WL2K RMS Network

14.3.1. The primary purpose of the WL2K radio e-mail system is to provide inter-agency and tri-service support for broken internet e-mail links. Its secondary purpose is to provide command and control messaging between MARS chains of command, or messages between MARS members.

14.3.2. The equipment requirements include user computer software such as is Airmail or PaclinkMP. A USAF MARS affiliate member connecting to the WL2K system, will trigger a background process that registers the call sign and creates an email address on the WL2K system

14.3.3. USAF MARS affiliates members (end-users) are encouraged to assemble and operate stations capable of connecting to existing HF RMS Pactor radio nodes. A portable/deployable WL2K capable station is also desirable.

14.3.4. Application to operate a RMS pactor station is processed through the National Digital Networks Manager to the Chief, USAF MARS. Equipment requirements including a full-time

internet connection must be met. The proposed geographic location is then reviewed with WL2K system administration to determine if an applicant's location fits the needs of the system.

14.3.5. RMS packet station operation is at the discretion of the MARS affiliate member. Co-ordination with state and region digital managers is encouraged since operation of the station will be on a VHF frequency under their control. The setup of a RMS packet station does require registration and configuration information through WL2K system administration. A RMS packet station co-located with a RMS Pactor station is approved when Pactor station operation is approved per 14.3.4.

14.3.6. The National Digital Networks Manager co-ordinates with WL2K System Administration to provide frequencies that are shared as part of the Joint-MARS Tri-Service WL2K Radio Message Server (RMS) Network.

14.3.7. The National Digital Networks Manager and Deputy Manager for Operations, Joint-MARS WL2K RMS Network coordinate with WL2K System Administration to assign the correct USAF MARS Call Signs to AFMARS Stations in the Joint-MARS Tri-Service WL2K RMS Network.

14.4. The TRANSCON CW Telegraphy Network (TCN)

14.4.1. To establish policy, standards, and procedures for use of the Radiotelegraph communications mode (known as continuous wave, or CW) on USAF MARS frequencies.

14.4.2. CW shall be used on USAF MARS frequencies to support the primary MARS mission of emergency/contingency communications. While modes such as Voice, RTTY, Pactor, and Packet, receive their share of net or network activity, CW is an equally important communication mode.

14.4.3. Within the USAF MARS program, a special net, the TRANSCON CW NET (TCN), shall be established solely for CW use. TCN shall be an open CW Net. All Military unit stations, Affiliates, and other Service MARS members, except those in training, shall be allowed to participate. TCN frequencies and schedule of operations shall be determined and coordinated with the National Digital Networks Manager, the National HF Voice Net Manager, and the National CW Net Manager, and assisted by their Respective Deputy Managers.

CHAPTER 15

AUTOMATIC LINKING ESTABLISHMENT (ALE)

15.1. Automatic Link Establishment (ALE) is an HF Transcon Net where participating stations have radio equipment designed to ascertain automatically the highest quality reliability of linking together two or more stations operating on the same frequency, given a group of frequencies customarily in different bands, therefore accommodating changes in day, night, and solar cycle propagation, and other propagation anomalies. The ALE function is limited to this, and then the station operators select a mode of communication, voice (SSB), or from various authorized data modes, and communicate either automatically or manually with each other and to send and receive messages. This is a special net. The particular modes of data protocol are determined by the TRANSCON ALE Net Manager. Modes may be singular point to point, or grouped data modes with interactive automated functions. Grouped data may be networked automatically for message forwarding and reverse forwarding. A dedicated routing backbone may be used, or a randomized routing based upon active connections, where stations may manually or automatically relay in a source origin to target delivery or posting configuration. The ALE data network may automatically interface with other MARS data networks.

15.2. ALE is available in either firmware manufactured radios, or ALE in software to function add-on to other CAT-capable manufactured radios. A special version of this software was developed by the joint MARS ALE Software Development Team (SDT) which conforms to MIL-STD-188. The primary mode of TRANSCON ALE communications is data. The secondary communication mode is SSB.

15.3. Each Air Force MARS member participating on TRANSCON ALE nets, must submit a request for an ALE identifier with the TRANSCON ALE Manager prior to transmitting on the ALE nets. The TRANSCON ALE Manager will submit all requests to the Chief, USAF MARS for registering with the Air Force Frequency Management Agency.

CHAPTER 16

INTEROPERABILITY WITH OTHER MARS BRANCHES

16.1. The purpose of this chapter is to establish uniform procedures, policy, and standards for operation between members of the three branches of MARS at the state and region level. The contents of this chapter have been coordinated among all three service Chiefs. There is effectively a single MARS system, with three branches. Organizational differences should not get in the way of providing communication where it is needed.

16.2. Army and Air Force MARS began full interoperability on all circuits in April 1997. Army and Air Force MARS interoperability with Navy-Marine Corps MARS is limited only by Navy-Marine Corps MARS frequencies not being authorized on a nationwide basis.

16.3. All service MARS interoperability is authorized on a nationwide basis subject to the following restrictions:

16.3.1. All service MARS stations are authorized to use any VHF circuits for digital and voice communications within the host service's established guidelines.

16.3.2. All service MARS stations are authorized to enter any Army or Air Force MARS HF traffic net.

16.3.3. All Army and Air Force MARS stations are authorized to enter any Navy-Marine Corps MARS area (state) or region traffic net as long as they are located within the borders of the Navy-Marine Corps MARS region in which the net is being operated.

16.3.4. All service MARS stations are authorized to enter any service MARS emergency communications net during an actual emergency.

16.3.5. This interoperability does not apply to HF phone patch nets to and from Navy and Coast Guard ships, or Air Force aircraft. Operations for these units are restricted to Navy-Marine Corps MARS stations in the case of ships, and Air Force MARS in the case of USAF aircraft.

16.4. All three services have basically the same message format, however there are minor differences. The following guidance is provided:

16.4.1. Message precedence will not be changed.

16.4.2. Any other changes to message heading needed to comply with another service's policies or procedures will be made by the receiving station. Under no circumstances will the text of any message be altered, except by the originator.

16.5. The host service will supply the net control station that is the governing authority on all procedures. Host net procedures will be observed without comment or debate. If the guest is unwilling to follow the host procedures, a tactful withdrawal from the frequency is recommended. USAF MARS members are generally authorized only to use their personal

MARS call sign on Army or Navy-Marine Corps frequencies. However, billet call signs of AMD, RMD, AEC, REC, SMD, SEC, and RLO are appropriate in ECOM incidents to indicate position and authority.

CHAPTER 17
USAF MARS TECHNICAL SERVICE

17.1. The **USAF MARS TECHNICAL SERVICE** is a supporting activity for the entire USAF MARS program. As its name implies this service provides a technical resource in information and guidance to all the members and activities of the USAF MARS program.

17.2. The program is managed by a National Technical Service Manager, appointed by the Chief, USAF MARS; and Technical service managers in the Area, and Region administrative areas, as practical.

17.3. The primary mission of the USAF MARS Technical Service, is providing advice and consult, as possible, to assure signals embodying good engineering practice on the USAF MARS frequencies. To provide for this, technical service representatives should be present on all USAF MARS nets, to provide consul and advice as requested.

17.4. The USAF MARS Technical Service may respond to requests from the Chief, USAF MARS, and, Area and Region Directors, to research questions of a technical nature affecting the USAF MARS program.

17.5. The USAF MARS Technical Service may respond to requests from the Chief, USAF MARS, and, Area and Region Directors, to undertake special projects in support of the USAF MARS program.

17.6. The USAF MARS Technical Service may sponsor Technical Service Nets for the purpose of providing information and training. Frequency use is to be coordinated with the appropriate authority.

17.7. The USAF MARS Technical Service is a secondary assignment, by AF Form 3661, completed by appropriate authority. Appointment should be on the basis of technical ability and experience to serve the needs of the USAF MARS program.

17.8. Affiliates who are members of the USAF MARS Technical Service will submit their participation time for technical service activities, to the responsible technical service manager on a quarterly basis. All Technical service managers will submit participation reports for the affiliates in their area of responsibility to the appropriate records managers.

CHAPTER 18
SURPLUS PROPERTY MANAGEMENT

18.1. One of the benefits of being a part of the USAF MARS program is the ability to obtain surplus property from the Defense Reutilization Marketing Office (DRMO). This MOI establishes the procedures for acquiring property, including: the initial screening, requesting, and requisitioning.

NOTE: The acquisition of government surplus property is a privilege, and can be refused at anytime by the USAF MARS Office for any legitimate reason.

18.2. The Chief, USAF MARS may appoint a federal employee to serve as USAF MARS Property Officer. This employee is responsible for providing guidance and procedures to USAF MARS members for receiving, transferring, or turning in excess/surplus government assets.

18.2. All transactions related to government surplus equipment in the USAF MARS program must be approved by the USAF MARS Property Officer and/or Chief, USAF MARS.

18.3. Government surplus property issued to affiliate members continues to be government-owned property and must be safeguarded from misuse, loss, theft, or damage. All records and documents supporting MARS property transactions are subject to inspection, audit, and maintenance/disposition as prescribed by AFI 23-110, *USAF Standard Supply Procedures*.

18.4. The USAF MARS Property Officer will maintain necessary files and records to establish a complete audit trail for all MARS property. Electronic software may be used in place of hard paper copies. As a minimum, the files outlined below will be kept.

18.4.1. Member files. These files contain copies of signed inventories, issue requests (DD Form 1348-1a), issue documents, transfers between members (DD Form 1150), turn-ins, approved cannibalization requests, and related documents relevant to all property issued to a particular member.

18.4.2. Suspense file. A copy of each request document approved by the USAF MARS Property Officer (w/ an assigned a control number) will be kept until a signed document is received acknowledging receipt of equipment.

18.4.3. Equipment request back-order file. Individual member's requests for equipment, that cannot be filled immediately, will be maintained and filed by item requested. Requests not filled within one year will be returned to the member. If the item is still required, a new request may be submitted at that time.

18.5. USAF MARS members must have completed training and have been highly active for at least two consecutive quarters, before requesting equipment.

18.6. Any USAF MARS member with a valid AF Form 3666 (MARS ID card) is permitted to screen excess/surplus government property for use in supporting the USAF MARS program. A list of Federal Supply Classification (FSC) groups authorized for USAF MARS member requisition is contained in table 18-1.

Table 18-1 - Federal Supply Classification Codes (FSC)

3610	Printing, Duplicating, and Bookbinding Equipment (MARS Officials Only)
5445	Prefabricated Tower Structures
5820	Radio and Television Communications Equipment, Except Airborne (Radios are limited to NTIA compliant only)
5821	Radio and Television Communications Equipment, Airborne (Radios are limited to NTIA compliant only)
5985	Antennas, Wave Guides and Related Equipment
6115	Generators and Generator Sets, Electrical (15KW or less)
6117	Solar Electric Power Systems
6150	Misc. Electric Power and Distribution Equipment (Relating to Communications Equipment)
6625	Electrical and Electronic Properties Measuring and Testing Equipment
7010	Automatic Data Processing Equipment (ADPE) System Configuration
7020	ADP Central Processing Unit (CPU, Computer), Analog
7021	ADP Central Processing Unit (CPU, Computer), Digital
7022	ADP Central Processing Unit (CPU, Computer), Hybrid
7025	ADP Input/Output and Storage Devices
7030	ADP Software
7035	ADP Support Equipment
7045	ADP Supplies
7050	ADP Components

NOTE: Only equipment which clearly meets MARS requirements will be approved.

18.7. All excess/surplus property requisitioned by USAF MARS members will be for immediate use in its intended purpose by a MARS member. Property will not be acquired for storage (to be used later). Nor will property be acquired by one person only to issue out to other USAF MARS members as the need arises.

18.8. It is the responsibility of the USAF MARS member to locate their own equipment. When equipment is located:

18.8.1. USAF MARS member will properly fill out a DRMS Form 103, *Screener's Tally Request to Freeze Excess/Surplus Property* and an *Equipment Request Form*, and then send to their SMD for approval.

18.8.2. SMDs will annotate their approval/disapproval, along with the number of hours they had for the past two quarter, and then forward the request to USAF MARS Office.

18.8.3. When requests for equipment are approved by the USAF MARS Office, the member will be notified.

18.8.3.1. The member is responsible to arrange for pickup of the equipment themselves. The USAF MARS Office will not pay for any shipping charges, nor will not arrange for the shipping of any asset that does not fall in DRMS Guidelines.

18.8.3.2. A member may authorize another individual to pick-up the property for him/her. The USAF MARS Office must be notified of this arrangement prior to submitting any equipment request.

18.8.3.3. Submit the signed DD Form 1348-1a to the USAF MARS Office for processing. Copies will be in each member's active file, until the annual inventory is accomplished.

18.9. Members can be denied equipment request based on:

18.9.1. Not strong enough justification as annotated on the Equipment Request form. Statements such as "to enhance my station's capability," "to fulfill the USAF MARS mission," are examples of a general justification and will not be accepted.

18.9.2. Improperly filled out equipment request form and DRMS Form 103.

18.9.3. Members who do not have the minimum 12 hours of participation time for the past two consecutive quarters.

18.9.4. Members who violate guidelines set by this operating instruction and other publications governing USAF MARS.

18.9.5. Not forwarding signed copies of DD Form 1348-1a or DD Form 1150 acknowledging receipt of excess/surplus equipment from DRMO to the USAF MARS Office.

18.9.6. Not signing for their existing equipment account.

18.9.7. Any dispute between USAF MARS members over government surplus equipment.

18.9.8. Any other reason as deemed appropriate by the USAF MARS Office.

18.10. Members who fail to pick-up equipment, or violate any rules set by the USAF MARS Property Officer, may render themselves ineligible to receive government surplus property for a specified time period set by the USAF MARS Office.

18.11. Equipment issued to a member who no longer needs it may be transferred to another eligible USAF MARS member. Shipping costs will be borne by the member(s). Members

desiring to transfer equipment will coordinate all actions with the respective SMDs, prepare DD Form 1150 (five copies; one for gaining member, one for losing member, one for each SMD involved, one for the USAF MARS Office), sign the DD Form 1150, and send them to the USAF MARS Office for action. Copies will be filed in each member's active file, until the annual inventory is accomplished.

18.12. In the event issued government surplus equipment is lost, stolen, or damaged, the member will submit a letter to the USAF MARS Office, itemizing the property involved, and explain, in detail, the circumstances under which the event occurred. Local law enforcement authorities will be notified in the case of theft. A copy of the investigation report will be sent to USAF MARS Office.

18.13. All efforts will be made by members to turn-in equipment back into their closest DRMO office when the equipment no longer can perform the MARS Mission, or when the Member no longer has a need for the equipment. There may be times when it is not economically feasible to turn-in equipment back to DRMO, members can request in writing authorization to cannibalize an item issued to them by the USAF MARS Office (See attachment 1). The USAF MARS Office will notify the member of the cannibalization decision. Cannibalized equipment may not be bartered or sold. Requests for cannibalization must include (one letter per request is required):

18.14. When equipment is being recalled for any reason (membership termination, or member is deceased), the USAF MARS Office will direct the disposal of the equipment. The USAF MARS Office will advise the member (or executor, for a deceased member) in writing of the equipment to be turned in. A copy of this letter will be sent to the SMD. The member (or executor) is responsible for transporting the equipment to the designated drop off point as discussed between the member (or executor) and the SMD. The SMD will issue receipt for property on a DD Form 1150, give the person making the turn-in a copy, and forward a copy to the USAF MARS Office.

18.15. If the USAF MARS Office instructs the member to turning the equipment back to DRMO, the member will:

18.15.1. Request a turn-in DD Form 1348-1a from the USAF MARS Office.

18.15.2. Schedule a date and time with DRMO to turn-in the equipment.

18.15.3. Transport the equipment and the DD Form 1348-1a at their expense to the DRMO office.

18.15.4. Provide the USAF MARS Office with a DD Form 1348-1a signed by the DRMO office.

18.16. All forms used can be obtained from the USAF MARS Office.

NOTE: All government surplus equipment withdrawn from DRMO is subject to recalled for mission needs higher than USAF MARS

CHAPTER 19
ISSUE AND CONTROL OF
THE DEPARTMENT OF DEFENSE (DOD) MILITARY AFFILIATE RADIO SYSTEM
(MARS) DISASTER SUPPORT IDENTIFICATION CARD (DD FORM 2350)

19.1. The purpose of the DoD MARS Disaster Support ID card is to identify that the bearer is a MARS operator and upon authorization from a competent on-scene authority may be granted access to provide communications for the situation at hand. This identification card *does not* grant permission to access any military installation.

19.2. Strict attention to the procedures in this chapter are mandatory as improper procedures have the potential to place an official DoD MARS Disaster Support Identification Card into the wrong hands due to loss or theft. With loss or theft of an official DoD MARS Disaster Support Identification Card the possibility exists for a non-authorized person to misrepresent the Air Force Military Affiliate Radio System program, the United States Air Force, and the Department of Defense in an unfavorable and negative manner.

19.3. The AF MARS Chief will:

19.3.1. Control, safeguard and account for all issued and non-issued DoD MARS Disaster Support Identification Cards for all AF MARS Members. Sample ID cards is provided in attachment 3.

19.3.2. Establish a control log containing the minimum information:

19.3.2.1. The inclusive numbers of the initial supply of ID cards and the date received, i.e. "ID Card Numbers A04000 through A04100 received 15 Nov 1994."

19.3.2.2. Subsequent issues of ID cards will be logged in a similar manner. Issuance will be in numerical sequence of control number (lowest number first).

19.3.3. Recover all the expired and cancelled ID cards, cut out the control number and affix it to the corresponding number in the control log. The remainder of the ID card will be destroyed via shredding or burning.

19.3.4. Safeguard all ID cards not yet issued in a container that provides security from theft.

19.4. The following procedures will be followed:

19.4.1. Prior to mailing the ID card to member for signature, the AF MARS Chief will fill-in the front of the card with all information.

19.4.2. Prepare ID card transmittal sheet (see attachment 4).

19.4.3. Mail ID card and transmittal sheet to the member.

19.4.4. The member will sign the transmittal sheet; in the signature block on only the front of the ID card; and to provide the AF MARS Chief a current passport type photo that will fit in the space provided on the front of the ID card. The member shall then mail the transmittal sheet, ID card, and photo back to the AF MARS Chief.

19.4.5. Upon receipt of the transmittal sheet, ID card, and photo from the member, the AF MARS Chief will match the member's signature on the ID card to the signature found on the AF MARS Application Form.

NOTE: If an AF MARS Application Form is not on file at the HQ AF MARS office, the member requesting the ID card will fill an application out and forward it to the AF MARS Chief.

19.4.6. The AF MARS Chief will fill out and sign the reverse side of the ID card.

19.4.7. The AF MARS Chief will laminate, and return the ID card to the member.

19.4.8. The transmittal sheet will be filed in the members personnel file.

19.5. The ID card is valid for 3 years from the date the AF MARS Chief signs and authorizes the issue of the ID card as shown on the front of the ID card. The DD Form 2350 ID card is valid only while the member issued the card holds the official position. Once the member no longer holds that position, or upon termination/resignation of the member, the member will send the ID card back to the HQ MARS Office.

19.6. The DOD MARS Disaster Support Identification Card (DD Form 2350) Issue and Control Log shall be retained for a minimum five (5) years. Five year retention of the Issue and Control Log is to perpetuate continual reclamation, control, and tracking of previously issued DD Form 2350 ID cards.

19.7. The issuance of the DD Form 2350 will be limited to personnel who actively:

- Active members of a Base Support Team.
- Active members involved with federal or civilian disaster groups.

Attachment 1

Sample Cannibalization Letter

From:

Date

To: HQ AFCA/ECFP (MARS)
203W. Losey Street, Rm 3100
Scott AFB, IL 62225

Subject: Cannibalization Request

1. Request cannibalization approval for the following item:

- Nomenclature:
- Stock Number:
- Serial Number:
- Document Number:
- Quantity and Unit of Issue:
- Condition Code:
- Cost of the Item:
- Date Item was Acquired:
- Justification: (must provide: the cause of the problem, why it can not be repaired, the cost to repair it, and the name of the nearest DRMO with distance)

Signature

Print Name

MARS Call Sign (no official calls)

Attachment 2

1. Copy of a completed DD Form 1150 (a blank copy can be obtained from the USAF MARS Office)

REQUEST FOR ISSUE OR TURN-IN		X	ISSUE TURN-IN	SHEET NO.	NO. OF SHEETS	5. REQUEST NUMBER FX311450013001	
1. FROM: Pete Smith, AFA3ZZ		6. DATE MATERIEL REQUIRED			7. PRIORITY		
2. TO: Joe Doe, AFA3ZY		8. VOUCHER NUMBER			9. POSTED	DATE	BY
3. ACCOUNTING AND FUNDING DATA					DATE	BY	
4. END ITEM IDENTIFICATION	a. NAME AND MANUFACTURER Motorola	b. MODEL Quantar	c. SERIAL NUMBER 12345643		d. PUBLICATION		
ITEM NO. a	STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIEL AND/OR SERVICES b	CODE c	OF ISSUE d	QUANTITY e	SUPPLY ACTION f	UNIT PRICE g	TOTAL COST h
1	5820011234567, Transceiver	1A1	EA	1		10,300.00	0.00
							0.00
							0.00
							0.00
							0.00
							0.00
						SHEET TOTAL	0.00
*ISSUE - I - Initial; R - Replacement						TURN-IN - U - Unserviceable; S - Serviceable	
10. ISSUE OR TURN-IN OF QUANTITIES IN "QUANTITY" COLUMN IS REQUESTED						DATE	BY
11. RECEIVED QUANTITIES IN "SUPPLY ACTION" COLUMN						DATE	BY
						23 Feb 05	(signature)
						23 Feb 05	(Signature)
GRAND TOTAL							

DD FORM 1150, OCT 57

REPLACES EDITION OF 1 JUL 56 WHICH MAY BE USED

ATTACHMENT 6

STANDARD OPERATING

PROCEDURE

FOR

CALLING AND OPERATING

A

VOICE NET



DEPARTMENT OF DEFENSE

CHIEF, ARMY MARS
CHIEF, AIR FORCE MARS
CHIEF, NAVY-MARINE CORPS MARS

22 Nov 2007

LETTER OF PROMULGATION

1. The Standard Operating Procedure for Calling and Operating a Voice Net was developed under the direction of the Chiefs of Army, Air Force and Navy-Marine Corps MARS and is promulgated for use by the Army, Air Force and Navy and Marine Corps.
2. Standard Operating Procedure for Calling and Operating a Voice Net is an UNCLASSIFIED, nonregistered publication.
3. Standard Operating Procedure for Calling and Operating a Voice Net will be required for use in all three MARS as of 01 JAN 2008.
4. Standard Operating Procedure for Calling and Operating a Voice Net supersedes the procedures of the following directives:
 - a. Army MARS:
 - b. Air Force MARS:
 - c. Navy-Marine Corps MARS: NTP 8(D), Chapter 7.
5. Permission is granted to copy or take extracts from this publication without the consent of the MARS Chiefs.
6. This publication, or extracts thereof, may be carried in aircraft or ships for use therein.
7. Correspondence concerning this publication should be addressed via the normal MARS chain of command to any one of the three MARS Chiefs.

STUART CARTER
Chief, Army MARS

ALLEN EIERMANN
Chief, Air Force MARS

B. G. LINDFORS
Chief, Navy-Marine Corps MARS

U.S. Military Affiliate Radio System (MARS)
Joint Air Force, Army, Navy-Marine Corps
Standard Operating Procedure
for Calling and Operating a Voice Net.

1. **TERMS AND SUBSTITUTIONS.** The following terms and substitutions will be used throughout this Standard Operating Procedure (SOP):

A1B2 is a sample net designator

NCS is the net control station (this would be substituted with the net control's actual call sign)

FRQ1 represents a frequency designator

AAA, BBB, CCC, etc represent stations on the net.

2. **GENERAL PROCEDURES.**

a. Nets are under the direct and immediate control of the net control station (NCS). The NCS is responsible to maintain net discipline at all times.

b. Alternate Net Control (ANCS): It is often expedient to have a station assigned in advance, or for NCS to designate a station at the start of the net, to serve as ANCS. The NCS could suddenly, and without warning, be gone from the net. It is highly recommended that net managers take into consideration the value of predetermined ANCS assignments.

c. Stations must first be checked into a net before they may conduct any business on the net.

d. Once checked in stations are expected to maintain constant watch on the net, be prepared to respond when called, and be prepared to receive traffic at any time.

e. Superfluous wording must be eliminated from transmissions. Stations are expected to use prescribed procedures at all times. Transmissions shall be short and concise, consistent with clarity.

f. Stations will use only authorized prowords and in accordance with their proper meaning only.

g. No station should expect pleasantries or unnecessary explanations during a directed net.

h. Record traffic must first be listed with the NCS, shall be passed to another station only at the direction of NCS, and only when the net is in directed net status.

i. Stations are expected to remain for the duration of the net unless granted permission by NCS to close down sooner.

3. OPENING A NET

a. Every net has a net designator as determined by such factors as type, administrative level, and location of the net.

b. The net designator not only identifies a specific net, it also serves as a special case of collective call sign representing all stations checked into a net, or wishing to check in.

c. NCS will make sufficient call ups at the start of the net in an effort to capture all the stations wishing to check in.

d. NCS then proceeds with handling listed traffic then any other net business and comments between stations. Training should be conducted as required, or as directed by competent authority. Training will always be done with the net in directed net status.

e. Frequent call ups are important throughout the net.

f. At the designated time the Net Control Station (NCS) will call the net as follows:

(1) Conditions good:

(a) NCS starts the net with a call up by transmitting:

A1B2, A1B2 THIS IS NCS OVER

(b) The net designator is stated twice only in the first call up. This call up serves multiple functions. It announces the net, puts the net in directed net mode, and authorizes stations to transmit for such purposes as checking in and listing traffic.

(c) Stations wishing to check in do so according to the following examples. Many nets have a large number of stations wishing to check in. It is essential that every station, before transmitting, listen carefully to avoid doubling. Key down, state the NCS call sign, let up momentarily to again be sure of no doubling, then complete their transmission if the frequency is clear.

NCS (pause) THIS IS AAA, NO TRAFFIC, OVER

NCS (pause) THIS IS BBB, ONE ROUTINE SOUTHERN CALIFORNIA,
OVER

NCS (pause) THIS IS EEE, ONE PRIORITY AAA, ONE ROUTINE NEW
YORK, OVER

NCS (pause) THIS IS CCC, REQUEST COMMS BBB, OVER

NCS (pause) THIS IS GGG, ONE ROUTINE AAA, OVER

(d) NCS must acknowledge all check ins. This should be done in the order stations checked in. NCS transmits:

AAA, BBB, EEE, CCC, GGG THIS IS NCS, ROGER, OUT

(e) If NCS did not fully hear a station, example CCC, NCS withholds acknowledging that station, finishes the remainder of the acknowledgements, then transmits:

CCC THIS IS NCS, SAY AGAIN OVER

(f) If NCS heard a station but did not hear the call sign, or only part of the call sign, NCS transmits an unknown station call up. Note that only stations who attempted check in, but were not acknowledged are authorized to transmit at this time. NCS transmits:

UNKNOWN STATION THIS IS NCS, OVER.

(g) If necessary NCS may call another station on the net to relay an unknown station's transmission.

(2) Conditions Poor

(a) When conditions are poor NCS will transmit the call up using words twice, without use of the proword WORDS TWICE.
e.g.

A1B2, A1B2 THIS IS NCS, NCS OVER

(b) Upon hearing the call up with words twice stations checking in will do so as under Conditions Good above by transmitting:

NCS THIS IS AAA, NO TRAFFIC OVER

(c) Stations will not normally use WORDS TWICE unless the station believes WORDS TWICE is necessary to help assure NCS receives his/her check in, or station is directed by NCS to do so. For example, NCS has a hard time hearing a station with call sign beginning with C. NCS transmits:

UNKNOWN STATION, UNKNOWN STATION THIS IS NCS, NCS WORDS TWICE, WORDS TWICE, OVER

(d) CCC having not heard his check in being recognized transmits:

NCS, NCS THIS IS CCC, CCC, NO TRAFFIC, NO TRAFFIC, OVER

(e) Note that the prowords THIS IS and OVER are not spoken twice.

(f) If a station has traffic to list under these conditions rather than list all the destinations, he/she should simply state the number and precedence of message(s). NCS can later obtain the destinations, or ask another station to obtain that traffic listing. Example, BBB has 1 priority Austin Texas, 1 routine for AAA, 1 routine for New York City. Under hard to hear conditions BBB would check in as follows:

NCS THIS IS BBB, 1 PRIORITY, 2 ROUTINE, OVER

(g) NCS will acknowledge check ins in the same way as outlined under Conditions Good above. Call signs will not be transmitted twice unless NCS deems it expedient to do so.

(3) Limiting Check-ins

(a) It may be desirable on larger nets to limit check ins by type or geographic area. This must be approved for each net or series of nets (e.g. all Region ECOM nets). by the respective director or Chief MARS (authority to approve may be delegated if authorized by the respective Chief MARS).

(b) These check in limiters shall not be used except where a large number of check ins is anticipated and there use

serves to help reduce doubling, save air time, and minimize confusion. Their use, when authorized, is not mandatory, unless so prescribed by competent authority. They exist as a tool to aid NCS in maintaining net control and discipline. Only authorized phrases shall be used to modify the call up process. Each subsequent call up may use a different limiter, such as calling for stations one state at a time. Use of a limiter does not require that NCS always use limiters on every call up. This should be based on a logical balance of the extra air time required versus the benefit of reducing problems.

(c) the limiting call up would be:

A1B2, A1B2 THIS IS NCS, (insert phrase here) OVER

(d) The following are authorized phrased to limit check-ins and would replace the "insert phrase here" in the above call up.

- STATIONS WITH RECORD TRAFFIC ONLY
- STATIONS WITH PRIORITY TRAFFIC ONLY (this would include any traffic of higher precedence. May be used in combination with a geographic area, example DADE COUNTY FLORIDA STATIONS WITH PRIORITY TRAFFIC ONLY)
- ALL NEW YORK ARMY MARS STAFF ONLY (substitute Navy or AF as appropriate. Replace "NEW YORK" with any logical MARS administrative or operational zone such as Region Five, or Central Area)
- ALL ALABAMA STATIONS (substitute ALABAMA with any generally understood geographic area including, but not limited to, state, county, borough, or city).
- ALL STAFF REGION ONE (this could be further limited by requesting only ECOM staff, only training staff, or any logical limitation of station type); or,
- by use of a collective call sign if that is most expedient.

4. FREE AND DIRECTED NET STATUS

a. All nets will always begin in directed net status. This means every station must have NCS permission to transmit. Record traffic may only be passed when the net is in directed net status.

b. After traffic has been handled, and while the net is still in directed net status, any necessary or prescribed training shall be conducted by NCS, designated training staff, or state, area, or region director.

c. After all traffic, training, and net business has been handled NCS may put the net into Free Net status if Free Net is authorized. Free Net means stations may contact each other directly without prior permission of NCS. A station may exchange informal comments with another station with the following limitations:

(1) All comments must, in some way, relate to MARS business or the mission of MARS;

(2) Comments need to be brief, consistent with clarity.

(3) Stations must pause between turnovers in transmission to allow for another station to break in.

(4) NCS may interrupt an exchange at any time and stop the exchange by calling a directed net. No explanation of NCS action in this regard is expected and none need be given.

5. ABBREVIATED CALL SIGNS

a. After the first call up, and at his/her discretion, NCS may authorize use of Abbreviated call signs provided such use is permitted on this net.

b. Full call signs must be used upon initial check in and any time NCS directs use of full call signs. When abbreviated call signs are authorized full call signs remain an acceptable option.

c. NCS may, at his/her discretion, change back to full call signs at any time. Examples of changing abbreviated call sign authorizations.

A1B2 THIS IS NCS, ABBREVIATED CALL SIGNS AUTHORIZED, OUT

A1B2 THIS IS NCS, USE FULL CALL SIGNS, OUT

5. CHANGING NET CONTROL STATION

a. Occasionally it may be necessary or desirable to transfer net control to another station. This could be for a brief

period or for the duration of the net. Assuming CCC is NCS and wishes to transfer control to AAA:

AAA THIS IS CCC, ASSUME CONTROL, OVER
CCC THIS IS AAA, ROGER OUT.

AAA is now NCS. AAA will immediately make a call up
A1B2 THIS IS AAA, OVER

(1) This notifies the net AAA has assumed control, puts the net in directed mode, and authorizes stations to check in or otherwise contact NCS.

(2) Variations could include some instruction from NCS to AAA such as:

AAA THIS IS CCC, ASSUME CONTROL FOR 10 MINUTES, OVER, or
AAA THIS IS CCC, ASSUME CONTROL UNTIL (state a time), OVER

(3) When CCC returns and wishes to resume control CCC will, at a call up or on a free net, transmit:

AAA THIS IS CCC I ASSUME CONTROL, OVER

(4) At this point AAA will acknowledge CCC and notify CCC of any changes in net status, new traffic listings, traffic passed, and stations that checked in or closed down while AAA was net control.

(5) CCC will acknowledge this information then make a call up. (It is never acceptable for CCC to tell AAA, "I was monitoring the entire time and have all the information." This does not confirm to AAA that CCC in fact does have all the information.)

b. Loss of NCS

(1) It may happen that NCS suddenly, and without warning, disappears from the net. This could be due to equipment failure, power outage, sudden change in propagation, or any number of reasons. If an alternate NCS (ANCS) has been assigned in advance and he or she suspects something has happened to NCS, that station will first attempt to contact NCS. If no contact is made ANCS will ASSUME CONTROL, make a call up, and proceed as outlined above.

(2) If no ANCS has been designated any station who hears the net well shall assume ANCS duties.

7. PASSING TRAFFIC

a. When ready NCS will call stations to pass their traffic based on the precedence of each message and the availability of addressee(s) or another station to relay that traffic. NCS will then direct the holding station on how to proceed.

Example A:

AAA THIS IS NCS, CALL BBB PASS ONE PRIORITY SAA OUT

BBB THIS IS AAA, ONE PRIORITY OVER

Assuming BBB copies AAA well, he sends

AAA THIS IS BBB, OVER

THIS IS AAA MESSAGE, RELAY PRIORITY (continue with the message header and text, pausing approximately ever 20 seconds to allow for a station with higher precedence traffic to break in.)

AAA ends his/her transmission with

OVER,

or in the case where there are additional messages to send to this station,

MORE TO FOLLOW, OVER

Assuming BBB copied the message completely and does not need repetitions he sends

THIS IS BBB, ROGER OUT

Or, to accept another message

THIS IS BBB, ROGER OVER

Example B:

If BBB does not copy well he must notify AAA of the problem using correct radio check prowords

AAA THIS IS BBB, WEAK READABLE, OVER

Or

AAA THIS IS BBB, UNREADABLE, OVER

b. Breaking the Net

(1) A station may interrupt the current flow of communications on a net if he or she has a communication of higher importance which must be conveyed as quickly as possible. Such communications includes:

(a) record traffic of a higher precedence than the traffic being passed;

(b) non-record traffic communication for one or more stations that is urgent, time sensitive, and may impact the safety of persons or property.

(2) The station wishing to break the net should wait for the next natural pause in the communication currently taking place; preferably waiting for the end of that communication.

(3) The content of the breaking station's communication should be the determining factor for establishing urgency, not simply that the station has, for example, a PRIORITY precedence message and a ROUTINE message is currently being sent.

(4) Breaking the net is a rare event. Normally, waiting a minute or two is not going to make a difference. If the breaking station knows the current communication is lengthy or several messages are going to be sent then interrupting may be necessary.

EXAMPLE:

When a station has determined it is essential to break the net he or she shall wait for a pause in the current transmission. He or she will then transmit the precedence of his/her traffic three times, e.g.:

PRIORITY, PRIORITY, PRIORITY (pause) NCS, THIS IS AAA, OVER
(The pause is to see that the other station has heard and is not continuing his or her transmission.)

NCS will transmit:

AAA, THIS IS NCS, OVER

AAA will then list his or her traffic or reason for breaking the net.

If it is evident that NCS does not hear the breaking station any station on the net may relay by calling NCS and advising him or her of the breaking station. This should normally be one of the stations being interrupted.

If NCS hears the breaking station, but it appears the station currently engaged in communications did not, NCS will acknowledge the breaking station by transmitting

AAA, THIS IS NCS, WAIT OUT

NCS will then take steps to regain control of the net.

c. Requesting Radio Check

(1) If a station first wishes to determine how well another station hears him/her the station asks for a radio check.

AAA THIS IS BBB, RADIO CHECK OVER.

(2) If AAA copies BBB well AAA will reply

BBB THIS IS AAA, LOUD AND CLEAR, OVER

(3) Only authorized radio check phrases will be used. The use of ROGER to mean loud and clear is not an adequate response since ROGER simply means "I copied your transmission correctly". It does not adequately state the condition.

8. CLOSING DOWN

a. Stations checking into a net are normally expected to be able to remain on the net for its duration, except in the case of on-going ECOM nets of long duration. Any station wishing to check out prior to end of net will call NCS, during a call up or on a free net, to request permission.

b. NCS may authorize the station to secure if NCS believes there will be no further need for that station. EEE wishes to leave the net.

NCS THIS IS EEE, REQUEST TO CLOSE DOWN, OVER

EEE THIS IS NCS, CLOSE DOWN, OUT

c. NCS may acknowledge the request, but delay authorization.

EEE THIS IS NCS, WAIT, OUT

d. In the latter case EEE's request has been acknowledged, but is not yet approved. NCS will need to call EEE back to authorize his closing down.

e. Stations may request a time to close down when they initially check in.

NCS THIS IS EEE, NO TRAFFIC, REQUEST TO CLOSE DOWN AT 1520Z, OVER

f. When acknowledging check ins NCS may require EEE to wait for future authorization or he may grant the permission at that time.

EEE THIS IS NCS, CLOSE DOWN AT 1520Z, OUT

g. Stations who have listed traffic during a check in shall not be given permission to close down until a disposition has been reached regarding all traffic listed by that station. Traffic must be passed to another station, delivered to the addressees, or the station agrees to take it to another net.

h. At the appointed time for a net to end, and NCS is satisfied that all traffic has been handled, NCS will close the net as follows:

A1B2 THIS IS NCS, CLOSE DOWN, OUT

i. It is imperative that NCS be aware whether a net is authorized to continue on past the designated end time. If it is not, NCS must arrange with stations holding traffic to dispose of that traffic on another net. This must be done well enough in advance of net end time to adequately take care of this business.

j. In some cases NCS may be authorized to close down a net before it's designated end time. For example, B1C3 net is assigned a one hour slot, but is authorized to close down after 30 minutes of operation if there is no further traffic or business to handle.

k. Once the net is closed down no further transmissions are authorized.

ATTACHMENT 7

ACP 125(F)

UNCLASSIFIED

ACP 125 (F)

ALLIED COMMUNICATIONS PUBLICATION

COMMUNICATION INSTRUCTIONS

RADIOTELEPHONE PROCEDURES

ACP 125(F)



September 2001

Released 5 September 2001
(Reverse Blank)

UNCLASSIFIED

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Released 5 September 2001

UNCLASSIFIED

II

FOREWORD

1. ACP 125(F), COMMUNICATION INSTRUCTIONS RADIOTELEPHONE PROCEDURE, is an UNCLASSIFIED publication. Periodic accounting is not required.
2. ACP 125 (F) will be effective for national, service, or Allied use when directed by the appropriate implementing agency.
3. When made effective, ACP 125(F) supersedes ACP 125(E), which will be disposed of in accordance with current organizational regulations.
4. This publication contains Allied military information and is furnished for official purposes only.
5. It is permitted to copy or make extracts from this publication.

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Released 5 September 2001

UNCLASSIFIED
IV

**THE COMBINED COMMUNICATION-ELECTRONICS BOARD
LETTER OF PROMULGATION
FOR ACP 125(F)**

1. The purpose of this Combined Communication Electronics Board (CCEB) Letter of Promulgation is to implement ACP 125 within the Armed Forces of the CCEB Nations. ACP 125(F), Communication Instructions Radiotelephone Procedure, is an UNCLASSIFIED publication developed for Allied use and, under the direction of the CCEB Principals. It is promulgated for guidance, information, and use by the Armed Forces and other users of military communications facilities.

2. ACP 125(F) will be made EFFECTIVE WHEN DIRECTED by the CCEB and, when effective, will supersede ACP 125(E), which shall be destroyed in accordance with National regulations. The effective status of this publication is shown below.

EFFECTIVE STATUS

Publication	Effective for	Date	Authority
ACP125F	CCEB	When Directed	LOP

3. Service-originated correspondence will be forwarded through the normal military chain of command, marked for the attention of the appropriate Service communications chief or director. All proposed amendments to the publication are to be forwarded to the national coordinating authorities of the CCEB.

For the CCEB Principals

R. McTeague
Wing Commander
Chairman of the CCEB Washington Staff

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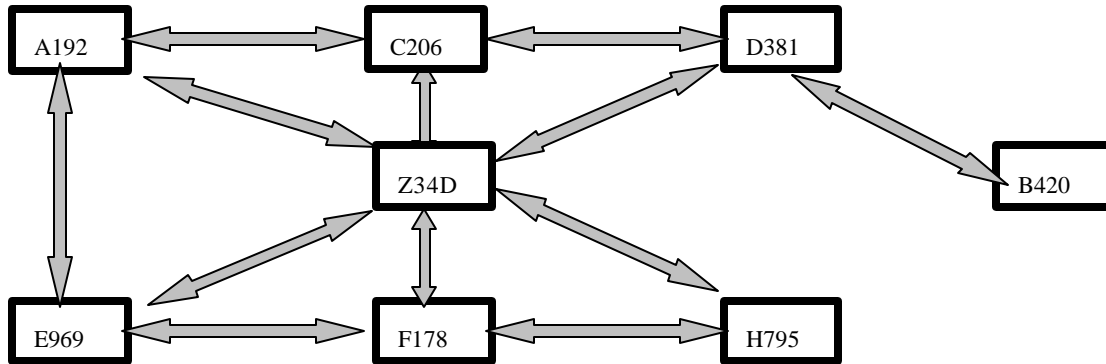
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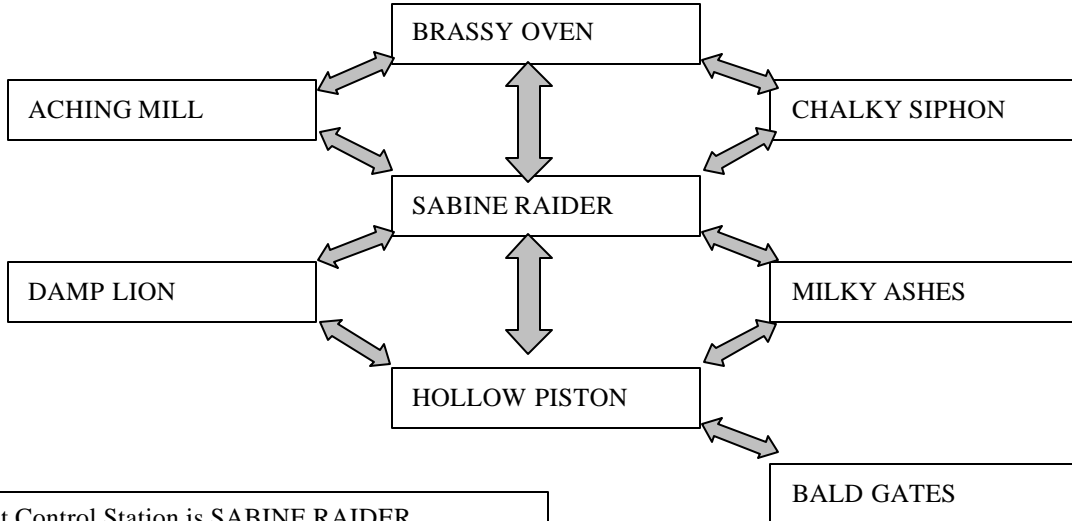
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NET DIAGRAMS

The following net diagrams illustrate the net organisation used in the examples in this publication. The call signs are of types derived from ACP 135 and are used solely to standardise examples.



Net Control Station is Z34D
Net Call Sign is Y13C
Off-Net station used in examples is B420



Net Control Station is SABINE RAIDER
Net Call Sign is RESORT PRIZE
Off-net station used in examples is BALD GATES

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RECORD OF MESSAGE CORRECTIONS

Enter Change or Correction in Appropriate Column

Message Correction Number	JAFPUB Number	Date Time Group	By Whom Entered

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CHAPTER 1

GENERAL

101. GENERAL

The aim of ACP125 is to prescribe the voice procedure for use by the armed forces of Allied nations on secure and insecure tactical voice nets. Its purpose is to provide a standardized way of passing speech and data traffic as securely as possible consistent with accuracy, speed and the needs of command and control.

- a. Voice procedure is necessary because:
 - (1) Speech on a congested voice net in battle must be clear, concise and unambiguous. To avoid interference between speech and data, it will often be expedient to assign the passage of data traffic to logistic or admin nets rather than to those directly associated with command and control.
 - (2) It must be assumed that all transmissions will be intercepted and analysed by potential adversaries, and used to provide radio location and signals intelligence. The use of a standard procedure is an important security measure against the constant threat of enemy electronic warfare activities.
 - (3) Some form of discipline is needed to ensure that transmissions do not overlap, if two people send at one time the result is chaos.
- b. Adherence to the procedure prescribed in ACP125 is mandatory on all Allied military tactical secure and insecure voice nets. Departure from, or variations in these procedures is prohibited. Such action can invalidate security precautions, reduce accuracy and speed, and create confusion. If the procedure does not cater for a specific situation, common sense and training experience should be used as a guide. Standard procedure must never be substituted with individually preferred methods, or the latter used as an excuse for lack of procedural expertise.
- c. The rules for Voice Procedure are frequently reviewed and changed as necessary. Suggestions for change are welcome and should be forwarded

to the appropriate Signal School for coordination and despatch to the national defence procedures authority.

102. VOICE PROCEDURE

The term Voice Procedure encompasses three related elements:

- a. Protocol. The rules of use – how to start and finish a message. On mixed voice and data nets this includes the prowords used for the passage of data traffic.
- b. Callsigns. Figures, letters, or combinations of both used to identify a communications station, an organization, or an individual on a radio net.
- c. Secure Nets and Codes. The cryptographic systems employed to protect secure nets, and the codes used to provide some degree of cryptographic protection for information transmitted over insecure nets.

103. PROTOCOLS

The protocols in this publication are designed to reduce wherever possible, consistent with accuracy, the time spent in the transmission of voice communications drills, message text and data traffic.

104. CALLSIGNS

The voice callsign system seeks to conceal from an enemy who is talking to whom, hence the level of command, composition and purpose of the net. Callsign systems are devised to make all nets sound the same to an intercepting operator or analyst. Unless considerable time is spent in monitoring and searching for telltale traffic, the nature, composition and purpose of an insecure net should not be obvious.

105. SECURE NETS

Traffic passed over a secure net must not be classified higher than the classification assigned to the crypto net variable in use. The rules for voice procedure apply equally to secure and insecure nets.

106. CODES

Tactical codes are designed to provide:

- a. Concealment of exploitable text.

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- b. Authentication tables.

107. ENCRYPTION OF PLAIN TEXT

The variety of operations in which Allied forces may be involved, the ability or otherwise of hostile agencies to respond to information passed over insecure nets and the threats to communications in peacetime, require commanders and communicators at all levels to exercise judgement as to what should and should not be enciphered. Decisions arrived at should be based on the guidelines given in this publication.

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CHAPTER 2
SECURITY

201. THE RADIO WAR

The range, efficiency and traffic capacity of modern radios provide an excellent method of communication. Unfortunately, unencyphered radio is the least secure of all means of communications. The unauthorised interception and recording of radio transmissions is impossible to detect or prevent.

- a. Military radio communications are a constant source of valuable intelligence to potential adversaries, both in peace and war. Information collected in peacetime is available for long term analysis by a potential enemy and is extremely useful for the planning of operations against Allied forces in time of war. This task is simplified by the often unwitting relaxation of security precautions during training exercises, actions that would be considered unthinkable in war. Inferior security and operating procedures practised in peacetime are unlikely to be discarded/corrected immediately prior to operations in time of crisis.
- b. Enemy response to security breaches made in wartime can be expected to be immediate. Even secure radio communications can provide considerable intelligence from characteristic patterns, traffic flow and the location of transmitters obtainable by direction finding (DF).
- c. It must be assumed that every radio transmission made during training exercises or on operations will be intercepted and evaluated by hostile signal intelligence (SIGINT) agencies, and the resulting intelligence ultimately used against Allied nations.

202. INTERCEPTED INFORMATION

This constant monitoring of Allied radio communications and the study and interpretation of the various traffic characteristics provide the enemy with vital current information concerning fighting capabilities.

- a. Intercepted information, when analysed and correlated with existing data from other sources, can provide intelligence of sufficient value to influence significantly enemy command decisions.

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b. Whether from direct security breaches or the provision of indirect clues through the indiscreet use of plain language, a potential enemy will attempt to discover:

(1) Task Organisation or Order of Battle

Command structure.
Radio net level, composition and function.
Ship and unit identities.

(2) Locations

Formation and unit boundaries.
Areas of operation.
Location of command ships and headquarters.

(3) Intentions

Operations plans.
Tactical groupings.
Movement.

(4) Combat Effectiveness

Casualties.
Damaged or defective ships, vehicles and equipment.
Standard of radio discipline.

203. SECURITY OF INFORMATION

a. Whether transmitted during training or on operations, all information of a long or short term nature likely to assist an enemy in wartime should be encoded, whenever possible, prior to its transmission on insecure radio. It is mandatory to encode:

(1) Positions, bearings and distances, stations, datum and reference points, grid references or place and ships names identifying location of friendly forces.

(2) Positions, bearings and distances, datum and reference points, grid references or place and ship's names identifying locations of enemy forces if the information is gained by stealth. When both

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friendly and enemy forces are aware that contact has been made, in other words after an exchange of fire has taken place, contact reports may be sent in the clear.

- (3) Start lines.
 - (4) FUPs and routes.
 - (5) Harbours and Tides.
 - (6) Timings.
 - (7) Future intentions (including "Warning Orders", "Orders" and "No Move Before" etc).
- b. Once sensitive information has been transmitted in the clear, there is no guaranteed period of safety and it must be assumed that enemy reaction will be immediate.
 - c. Each transmission must be carefully considered and the risk calculated. The rival priorities of security and speed are to be carefully weighed and balanced against the enemy's ability to intercept and exploit the transmitted information.

204. COMMUNICATIONS SECURITY

Communications Security (COMSEC) is the collective title for the measures taken to protect all aspects of communications in order to deny information and intelligence to an enemy. This includes cryptographic security details of which are contained in national cryptographic instructions.

205. TRANSMISSION SECURITY

Transmission Security is that component of COMSEC which includes all measures designed to protect Allied radio transmissions from enemy interception, analysis and deception.

- a. Interception. Interception is the act of searching for, listening to and recording radio communications and electronic transmissions for the purpose of obtaining information.

- b. Analysis. Analysis is the examination and interpretation of intercepted radio communications traffic and electronic transmissions for the purpose of obtaining intelligence.
- c. Deception. Deception is the introduction of a false transmission into a communications system, by imitating an authentic transmission, with the intention to deceive or create confusion.

206. DEFENCE AGAINST INTERCEPTION

The use of radio is part of an overall Emission Control (EMCON) policy and is a command function decided at the highest level.

- a. No radio transmission, can be regarded as safe from interception. It is important to remember that intercept receivers are designed to receive weaker signals at greater distances than standard receivers do.
- b. Maximum defence against interception and DF can be achieved if the following protective measures are taken:
 - (1) Radio Silence. Radio silence (defined in ACP167) is the only conclusive defence against interception. Instructions and procedures regarding the imposition, breaking and lifting of radio silence must be rigidly adhered to if the expected protection they can provide against enemy interception is to be attained. The lifting of radio silence does not allow radio to be used indiscriminately.
 - (2) Electronic Silence. Orders for the imposition of electronic silence may be passed over the radio by the use of a codeword issued by the general staff.
 - (3) Avoiding Unnecessary Transmissions. The necessity for each radio transmission should be carefully considered; radio is often used habitually when adequate alternative methods of communication are available. Having decided to make a transmission, called stations should be limited to essential addressees only to avoid unnecessary replies and acknowledgements. The checking of communications and associated transmitter tuning and testing should be reduced to an absolute minimum.

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- (4) **Transmission Length.** The longer a transmission the more vulnerable it is to intercept and DF. Individual transmission should not exceed 20 seconds and, whenever possible, terminated with the proword OUT. The pressel should always be released during pauses in procedure. The same principle should be applied to data transmissions.
- (5) **Procedure.** Poor procedure can increase transmission time and cause a series of unnecessary transmissions requesting clarification. Strict adherence to correct message procedure and communication drills, combined with good net discipline, will minimise transmission time and reduce vulnerability to interception and DF. Measures must be taken to avoid the continuous repetition of data messages – the danger is that unless an automatic acknowledgement is received from the intended recipient a data message may be repeated ad infinitum.
- (6) **Changing Frequency.** Changing frequency can break continuity of interception. Whenever possible, on insecure nets, the instruction to change frequency should be encoded or passed by secure means – this is important when the change occurs at an unpredictable time. Frequencies are never to be passed in clear over insecure radio.
- (7) **Use of Alternative Means of Communications.** The maximum use should be made of communications other than radio, particularly where a delayed response is acceptable to the originator.

207. DEFENCE AGAINST ANALYSIS

The following measures should be taken to render enemy traffic analysis more difficult and any resulting intelligence less reliable:

- a. **Calling and answering.** The greater the number of stations included in a call, the more potential intelligence there is available to an analyst to decide the composition, size and level of a net. For this reason, all station calls and large multi-station calls are unduly detrimental to security; their use should be confined to exceptional, unavoidable circumstances. Collective calls have the advantage of brevity without the need to divulge each callsign in the initial call but, used excessively, subsequent answering calls will soon provide the analyst with their grouping and identity.
- b. **Callsign omission.** After initial calling and answering calls have been made and the identities of the calling and called stations have been

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satisfactorily established, callsigns should be omitted entirely unless circumstances demand otherwise. In addition to denying the analyst useful repetition and confirmation of callsigns, overall transmission time is reduced.

- c. **Locations.** Locations, whether Allied or those of an adversary, are the most sensitive information sent over radio and are an unrivalled source of intelligence; an analyst can invariably relate unencoded enemy locations to friendly forces' positions. This is often due to the inadvertent disclosure of associated plain language, in either the same or other messages, combined with the analyst's knowledge of Allied tactical doctrine. Furthermore, an enemy commander, given that he is aware Allied forces know of his positions, can take appropriate counter action. As a general rule, all locations should be encoded.
- d. **Plain Language.** Plain language information of an obviously sensitive nature must be encoded prior to transmission over insecure radio. Every effort should also be made to identify and encode plain language information that may in isolation appear innocuous but when assembled with other similar information by an analyst becomes classified. Ideally, with the sensible use of vocabulary codes, transmissions should contain the minimum of exploitable plain language text.
- e. **Avoiding Compromise.** Plain language reference to callsigns, address groups, tactical codes or other security aids is forbidden and must be constantly guarded against is the security value and protection they offer is not to be compromised. Linkage or compromise enabling continuity between old and new operating frequencies must be avoided.
- f. **Standardisation.** Idiosyncrasies of speech and operating techniques enable the analyst, aided by a comprehensive filing system, to recognize an individual, his ship or unit and its expected role. The aim of every radio user should be to remain anonymous. The names of personnel, ships or units must never be transmitted in clear. Unique personal expressions or mannerisms, jargon and mention of specialist items of equipment must be avoided.

208. DEFENCE AGAINST DECEPTION

An enemy will rarely attempt deception during peacetime, but almost exclusively reserve its use for time of war to ensure maximum impact. Unsuspecting stations preoccupied

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with urgent tactical matters are particularly prone to this method of attack. The best defences against enemy deception are:

- a. Good Procedures. The success of enemy deception relies on his ability to appear inconspicuous, which is mainly dependent on his knowledge of Allied operation procedures.
- b. Constant Vigilance. Radio users and operators must remain alert to irregularities in procedure, unfamiliar speech and unexpected transmissions of dubious origin. Subtle use of previously recorded transmissions of Allied nets, played back by an enemy, can cause confusion and endanger Allied troops; these may not necessarily be on the same net or within a similar time frame. Special care must also be taken to identify and ignore counterfeit transmissions made solely to solicit answering calls, normally for DF purposes, when radio silence is in force. Whenever deception is recognised, or suspected, it should be reported immediately by secure means in accordance with national reporting procedures.
- c. Authentication. The correct and timely use of authorised authentication systems help protect Allied nets against enemy communications deception. The requirement for good authentication practices is less apparent in training, but will contribute significantly to combat survival and effectiveness in time of war.

209. AID TO SECURITY

- a. There are procedural aids which can considerably enhance transmission security. The degree and period of security protection afforded by these aids is greatly dependent on their correct use. This requires a thorough understanding of their potential and also their limitations. Abuse or misuse of security aids will quickly counter their security value and, equally dangerously instill a false sense of security.
- b. Unofficial, locally designed codes or adaptation of official codes, however well intentioned, will not deceive a cryptanalyst; only officially authorised codes are to be used. Aids to security are:
 - (1) Authorised low-level codes.
 - (2) Authentication.
 - (3) Codewords.

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- (4) Address groups
- (5) Callsigns.
- (6) Net identification signs.

210. LOW LEVEL CODES

Low level codes are designed to provide security protection for sensitive short-term tactical information where speed and simplicity of operation are the overriding considerations. When time and circumstances permit, secure communications systems or alternative physical methods should be used.

211. WHAT TO ENCODE

- a. Apart from the rules specified in paragraph 203, there can be no hard and fast guidance on what else in a message may be exploitable text in any particular circumstance. Military judgement must be exercised in every case to answer the following questions:
 - (1) How much information am I prepared to let the enemy obtain from my radio traffic?
 - (2) How might the enemy exploit the information I am about to transmit?
- b. Exploitable text is that which provides useful information for an enemy to use in a timely way (his response time can be expected to be as little as a few minutes) to our disadvantage; it includes locations and timings, assembly areas, start lines, ship and unit states and indications of intentions. Such indications include “warning orders”, “orders”, “no move before”, etc. Their exploitability must be judged according to the tactical situation at the time. For example, in the heat of battle, “orders” may be commonplace and of no significance to an enemy; on the other hand, during a lull, a “warning order” may be the key to his discovering the time and place of a counter attack. For added guidance the policy about what may or may not normally be sent by unprotected means will be laid down by the Allied/theatre/command HQ concerned.
- c. All exploitable text must be encoded whenever the situation permits. If the delay imposed by encoding a message, or parts of a message, will

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prejudice the operation more than the plain text transmission will
prejudice its security then the message may be sent in plain text at the
discretion of the originator. However, he must understand that he may be
called upon to justify his decision.

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212. REAL OR NON-EXERCISE TRAFFIC

In training, there is a need to differentiate between exercise play and events, which require action outside the context of the exercise; conventionally this is known as "real" activity. Messages associated with real activity are just as exploitable as any other and care must be taken to ensure that security is not unduly prejudiced by the urgency of such situations. In order to highlight the differences between real and other messages, the proword NO PLAY is used. Its meaning is defined in the list of prowords at Annex A to Chapter 3

213. AUTHENTICATION

Authentication is a security aid designed to protect Allied communications against deception from fraudulent transmissions by unauthorised persons.

214. AUTHENTICATION SYSTEMS

The type of authentication system in use will usually depend upon the type of net, ie ship, unit command or formation level. Challenge and reply authentication is common to unit and formation nets, transmission or self-authentication is normally confined to Allied formation or specialised nets. The rules concerning the occasions when authentication should be used, with examples, are contained in Chapter 6.

215. CODEWORDS

A codeword is a single word with a pre-arranged meaning, used to establish a condition, an alert, or to initiate the implementation of a plan or operation. Codewords are prepared and issued by the Operations Staff. Their meanings are always classified and are intended to be used once only as an executive order. They may therefore be sent in clear. Codewords are rarely used in connection with communications, other than for conditions of electronic silence.

216. RADIO APPOINTMENT TITLES

Radio appointment titles are not codewords. They may be authorised for combined, national or joint working as required. With the exception of SUNRAY and SUNRAY MINOR, which may be used for the Commander and second-in-command on Marine, Army and Air Force tactical nets, appointment titles are not normally used.

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217. ADDRESS GROUPS

An address group is a unique, daily changing group of four random letters used to disguise a command, formation, unit or sub unit. Address groups are classified when connected with their meaning. The Allied theatre or command HQ will determine the classification of address groups.

- a. Use of Address Groups. The use of address groups should be kept to a minimum and never qualified. Address groups are used:
 - (1) In place of clear names and addresses in voice conversations and messages, except when referring to a station in the same unit or on the same net.
 - (2) As a temporary callsign, when a station joins a net for which he has no allocated callsign.
 - (3) To refer, as required, by implication and context headquarters to which the address group is allotted, or to the whole formation, unit or sub unit served by that headquarters.
- b. When used, address groups are pronounced phonetically and, except in the address component of a formal message,

218. CALLSIGNS

- a. A callsign is a combination of letters and figures that identify a communication facility, an organisation, or an individual on a radio net. Its primary use is to establish and maintain communications. The callsign system to be used on an Allied net will be specified by the appropriate command HQ communications staff.
- b. After the initial call between two stations, callsigns should be dropped altogether unless confusion is likely to arise by so doing. In different circumstances, some callsign systems allow users to abbreviate callsigns once communications have been established. Again, as an aid to COMSEC, the abbreviated callsign should be dropped whenever possible in communications between two stations unless confusion will arise in so doing.
- c. Full callsigns are to be used on the following occasions:
 - (1) When first establishing a net.

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- (2) When reporting into a previous established net.
 - (3) In the transmission instructions and address components when a message is required to be relayed to a station on a different net.
- d. When secure daily changing callsigns are used for classified and unclassified message and unit or ship names appear in the text of an unclassified message, the unit or ships name is to be replaced by the relevant secure callsign or address group in full. Callsigns and address groups may be preceded by CALLSIGN or ADDRESS GROUP, as appropriate, when used in this manner.

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CHAPTER 3

ACCURACY

301. GENERAL

Voice procedure is designed to provide the fastest and most accurate method of speech transmission. All messages should be pre-planned, brief and straightforward. Ideally, messages should be written down: even brief notes reduce the risk of error. Messages should be constructed clearly and logically in order not to confuse the recipient.

302. SPEECH TECHNIQUE

The correct use of audio equipment and clear, concise speech over the radio are essential if transmissions are to be successfully received and understood at the first attempt.

- a. Use of Audio Equipment. In many situations, particularly in noisy or difficult conditions, the use of headsets fitted with a noise cancelling microphone is preferable to loudspeakers: a headset will aid concentration and the audibility of the incoming signal. The double-sided, noise cancelling microphone is designed to cancel out surrounding noise, for example engine noise or gunfire, allowing speech entering on one side to pass freely. The microphone should be as close to the mouth as possible.
- b. Method of Speech. The key words to remember are Rhythm, Speed, Volume and Pitch (RSVP).
 - (1) Rhythm. Use short sentences divided into sensible phrases which maintain a natural rhythm; they should not be spoken word by word. Where pauses occur, the pressel should be released to minimize transmission time and permit stations to break in when necessary.
 - (2) Speed. Speak slightly slower than for normal conversation. Where a message is to be written down by the recipients, or in difficult conditions, extra time should be allowed to compensate for the receiving station experiencing the worst conditions. Speed of transmission is easily adjusted by increasing or decreasing the length of pauses between phrases, as opposed to altering the gaps between words; the latter will create an unnatural, halted style of speech, which is difficult to understand.

- (3) Volume. Speak quietly when using whisper facilities, otherwise the volume should be as for normal conversation. Shouting causes distortion.
- (4) Pitch. The voice should be pitched slightly higher than for normal conversation to improve clarity.

303. AIDS TO ACCURACY

- a. Pronunciation of Letters. To help identify spoken letters of the alphabet a standard phonetic word alphabet is used. Each letter of the alphabet is represented by a uniquely pronounced word to enable consistent and accurate pronunciation. For example, BRAVO is the phonetic equivalent of the letter B and DELTA equates to the letter D.
- b. Phonetic Alphabet. The following alphabet table shows the phonetic word equivalent of each Letter as it is written and then as it is spoken. The underlined portion of the spoken words indicates the syllables that require emphasis.

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

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L	LIMA	<u>LEE</u> -MAH	Y	YANKEE	<u>YANG</u> -KEY
M	MIKE	MIKE	Z	ZULU	<u>ZOO</u> -LOO

- c. Pronunciation of Figures. Whenever figures are spoken in single digits over radio they are pronounced as shown in the following table. The underline portion of the spoken words indicates the letter or syllables requiring emphasis.

Figure	Spoken as	Figure	Spoken as
1	WUN	6	SIX
2	TOO	7	<u>SEV</u> -EN
3	TREE	8	AIT
4	<u>FOW</u> -ER	9	<u>NINE</u> -ER
5	FIFE	0	<u>ZE</u> -RO

304. RULES FOR SPELLING

- a. Plain Text. Spelling is necessary when difficult radio conditions prevent the reception of an obscure word, or of a word or group, which is unpronounceable. Such words or groups within the text of plain language messages may be spelt using the phonetic alphabet; they are preceded by the proword "I SPELL". If the word is pronounceable and it is advantageous to do so, then it should be spoken before and after the spelling to help identify the word.

Example 1. Pronounceable word – UNNA: ..."UNNA- I spell, Uniform November November Alfa".

Example 2. Unpronounceable word or group – UTFX: ..."I spell, Uniform Tango Foxtrot Xray".

- b. Exceptions to this rule, when letters are always spoken phonetically wherever they appear, and without the proword I SPELL are:

- (1) Callsigns and Net Identification Signs (NIS)
- (2) Grid references (UTMs).

- (3) Target indications
- (4) Authentication.
- (5) DTG zone suffix/SICs.
- (6) Address groups.
- (7) Encrypted text.

305. ENCRYPTED TEXT

On insecure nets, when a text, or portion of text is encrypted, the letter and figure groups are always to be spelt phonetically without the proword I SPELL.

Example. Encrypted portion of text. 2S BJ MW IF: ... "TWO SIERRA – BRAVO JULIETT – MIKE WHISKEY – INDIA FOXTROT".

306. RULES FOR FIGURES

- a. When radio conditions are satisfactory and confusion will not arise, figures in the text of a message may be spoken as in normal speech. During difficult conditions, or when extra care is necessary to avoid misunderstanding, figures are sent digit by digit preceded by the proword FIGURES. This proword warns that figures follow immediately, to help distinguish them from other similarly pronounced words.

Examples:

Figure	Satisfactory conditions	Difficult conditions
23	Twenty three	FIGURES two three
50	Fifty	FIGURES five zero
146	One hundred and forty six	FIGURES one four six
200	Two hundred	FIGURES two zero zero
1009	One thousand and nine	FIGURES one zero zero nine

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1630 hours Sixteen thirty hours FIGURES one six three zero
hours

2800 Two thousand eight hundred FIGURES two eight zero
zero

12000 Twelve thousand FIGURES one two zero zero
zero

b. Exceptions to this rule, when figures are always spoken digit by digit whenever they appear, and without the proword FIGURES are:

- (1) Callsigns
- (2) Grid references.
- (3) Target indications (except that exact multiples of a hundred or a thousand are pronounced as such).
- (4) Authentication
- (5) Formal message date time groups (DTGs).

307. RULES FOR MIXED GROUPS

The rules for sending mixed letter/figure groups incorporate the same principles that apply to sending letters and figures separately. The same information may be sent in two different ways depending on the circumstances.

Example 1. Satisfactory conditions:

Mixed group	spoken as
ACP 125	ACP one two five

Example 2. Difficult conditions:

Mixed group	spoken as
ACP 125	I SPELL ALFA CHARLIE PAPA FIGURES one two five

308. AIDS TO BREVITY

- a. Abbreviations. Although originally designed to save time in writing, abbreviations will often save time in speech. Many abbreviations are so commonly used in normal speech they are more familiar than their original unabbreviated form. The use of such abbreviations in radio transmissions is to be encouraged provided that:
 - (1) They are quicker and easier to use than the full word.
 - (2) They are sufficiently well known to avoid any confusion and subsequent confirmatory transmissions.
 - (3) Where an abbreviation has more than one meaning, the intended meaning is obvious to the addressee from its context or frequent usage.
- b. Whether abbreviations are spoken as such, spelt phonetically or expanded to their unabbreviated form, will depend on prevailing radio conditions and the circumstances in which they are used. The following common sense rules should be applied to take account of conditions:
 - (1) Satisfactory Conditions. To ensure that the advantage of brevity which abbreviations provide is not lost, they will be spoken as in normal speech.

Examples:

RV as RV instead of "I spell Romeo Victor".

DR as DR instead of "I spell Delta Romeo".

ETA as ETA instead of "I spell Echo Tango Alfa".

- (2) Difficult Conditions. In conditions which require amplification of common abbreviations normally spoken as such, it is usually quicker and easier to use the full word than to waste time and effort in spelling.

Examples:

Dispatch Rider is better than "I spell Delta Romeo".

Recce (reconnaissance) is better than "I spell Romeo Echo Charlie Charlie Echo".

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- c. Abbreviations should only be spelt phonetically when it is either quicker and easier to do so, or the spelling will be more readily received and understood than the full word or phrase. Examples where spelling is more appropriate than the full words are:

“I spell November Bravo Charlie” instead of “Nuclear Biological and Chemical”.
 “I spell Papa Oscar Lima” instead of Petrol, Oil and Lubricants.

“I spell Uniform Tango Mike” instead of Universal Transverse Mercator.

- d. Where necessary the sender of a message may, on behalf of the drafter, expand common abbreviations during difficult conditions or when a transmission can be simplified. Where any doubt exists as to the drafter’s intentions, abbreviations should never be expanded but spelt phonetically leaving the addressee to interpret the meaning. The abbreviation DF can mean “Defensive Fire” or “Direction Finding”; if the intended meaning is not obvious then DF should be spelt phonetically.

- e. Procedure Words (Prowords). To keep voice transmissions as brief and clear as possible standard prowords are used in place of whole sentences. Prowords are easily pronounced and recognised words or phrases used to convey a specific predetermined meaning, for example:

<u>Proword</u>	<u>Meaning</u>
ROGER	I have received your last transmission satisfactorily
OUT	This is the end of my transmission to you and no answer is required or expected

A full list of prowords is given at Annex A to this chapter

- f. Punctuation. Punctuation is not to be used unless it is necessary to the sense of a message, and should rarely be required in radio messages where the originator makes his own transmission. Punctuation can occur more often in written informal or formal messages. When the use of punctuation is essential, it should be written and spoken as follows:

Punctuation	Spoken as	Symbol or Abbreviation
Full stop/period	Full stop	. PD
Comma	Comma	, CMM

Slant/Oblique	Slant	/	
Hyphen	Hyphen	-	
Left-hand bracket	Brackets on	(	Paren
Right-hand bracket	Brackets off	)	Unparen
Colon	Colon	:	CLN
Semi-colon	Semi-colon	;	SMCLN
Question Mark	Question mark	?	Ques
Decimal point	Day-See-Mal	.	Point

g. Brevity Codes. Messages transmitted in a set format, including data messages, may be shortened through the use of brevity codes. A brevity code is a list of numbers or letter, which equate to a standard pre-determined vocabulary of words or phrases, for example equipment and commodity codes. Brevity codes can reduce long stereotyped sentences or lists to a few characters and save considerable time in transmission. It is however important to remember that such codes provide no security at all, and must be regarded as the equivalent of plain language when transmitted unencoded over radio.

h. Nicknumbers. A nickname is a two figure group which may be used on forward tactical nets to describe;

Bridges	Rivers
Reserved Demolitions	Place names
Road Junctions	Report Lines
Stop Lines	Killing Areas
Counter Attack/Penetration Areas	

and any other prominent features which need to be disguised. They have NO SECURITY VALUE and are ALWAYS TO BE ENCODED. They are introduced by the Proword NICK.

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- i. Writing Abbreviations and Symbols:
 - (1) When writing, symbols should always be used in preference to abbreviations, with the symbols for full stops and commas ringed to make them more conspicuous.
 - (2) If punctuation marks other than those described are vital to the sense of the text, they are to be written in full, eg APOSTROPHE, QUOTE, UNQUOTE and spoken as such.

309. LEGIBILITY OF CHARACTERS

Legible writing is essential if handwritten messages are to be transmitted and received accurately. All handwritten messages drafted for transmission are to be written in capital letters, The following conventions for written characters and symbols are to be observed when drafting and receiving messages:

- a. The figure ZERO is written with a slant through it to distinguish is from the letter OSCAR.
- b. The figure ONE is written with a line underneath to distinguish it from the letter LIMA.
- c. The letter ZULU is written with a hyphen through it to distinguish it from the figure TWO.

LIST OF PROWORDS AND THEIR EQUIVALENT PROSIGNS OR OPERATING SIGNALS

Proword	Explanation	Prosign/ OPSIG
ACKNOWLEDGE (ACK)	An instruction to the addressee that the message must be acknowledged	ZEV or QSL
ADDRESS GROUP	The group that follows is an address group	
ALL AFTER	The portion of the message to which I have reference is all that follows.....	AA
ALL BEFORE	The portion of the message to which I have reference is all that precedes.....	AB
ANSWER AFTER	The station called is to answer after call sign..... when answering transmissions.	ZGO
ASSUME CONTROL	You will assume control of this net until further notice	ZKD
AUTHENTICATE	The station called is to reply to the challenge which follows	INT ZNB
AUTHENTICATION IS	The transmission authentication of this message is.....	ZNB
BREAK	I hereby indicate the separation of the text from other portions of the message	BT
BROADCAST YOUR NET	Link the two nets under your control for automatic rebroadcast	
CALL SIGN	The group that follows is a call sign	
CLOSE DOWN	Stations are to close down when indicated. Acknowledgments are required	ZKJ
CORRECT	You are correct, or what you have transmitted is correct.	C
CORRECTION	An error has been made in this transmission. Transmission will continue with the last word correctly transmitted.	EEEEEEEE
	An error has been made in this transmission (or message indicated). The correct version is.....	C
	That which follows is a corrected version in answer to your request for verification	C
DISREGARD THIS TRANSMISSION –	This transmission is in error, disregard it. (This proword shall not be used to cancel any message that	EEEEEEEE AR

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Proword	Explanation	Prosign/ OPSIG
OUT	has been completely transmitted and receipted.	
DO NOT ANSWER	Stations called are not to answer this call, receipt for this message, or otherwise transmit in connection with this transmission. When this proword is employed, the transmission shall be ended with the proword OUT.	F
EXECUTE	Carry out the purport of the message or signal to which this applies. (To be used only with the Executive Method.)	IX-----
EXECUTE TO FOLLOW	Action on the message or signal which follows is to be carried out upon receipt of the proword EXECUTE. (To be used only with the Delayed Executive Method.)	IX
EXEMPT	The station(s) immediately following is (are) exempted from the collective call or from collective address	XMT
FIGURES	Numerals or numbers follow.	
FLASH	Precedence FLASH.	Z
FROM	The originator of this message is indicated by the address designator immediately following	FM
GRID	The portion following is a grid reference	
GROUPS	This message contains the number of groups indicated by the numeral following.	GR
GROUP NO COUNT	The groups in this message have not been counted.	GRNC
I AM ASSUMING CONTROL	I am assuming control of this net until further notice	ZKA
I AUTHENTICATE	The group that follows is the reply to your challenge to authenticate	ZNB
IMMEDIATE	Precedence IMMEDIATE	O
IMMEDIATE EXECUTE	Action on the message or signal following is to be carried out on receipt of the EXECUTE. (To be used only with the Immediate Executive Method.)	IX
INFO	The addressees immediately following are addressed for information	INFO
I READ BACK	The following is my response to your instructions to read back	IRB
I SAY AGAIN	I am repeating transmission or portion indicated.	IMI
I SPELL	I shall spell the next word phonetically.	
I VERIFY	That which follows has been verified at your request and is repeated. (To be used only as a reply to VERIFY.)	C
MESSAGE	A message which requires recording is about to follow. (Transmitted immediately after the call.	ZBO

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Proword	Explanation	Prosign/ OPSIG
	This proword is not used on nets primarily employed for conveying messages. It is intended for use when messages are passed on tactical or reporting nets.)	
MORE TO FOLLOW	Transmitting station has additional traffic for the receiving station.	B
NEGATIVE (NEGAT)	No. Cancel message(s) sent by the Delayed Executive Method. (NEGAT may be used to cancel a single message or a group of messages awaiting execution.)	ZUG
NET NOW	All stations are to net their radios on the unmodulated carrier wave which I am about to transmit.	ZRC2
NO PLAY	During exercises the words NO PLAY are used to distinguish real activity from messages concerned with exercise play e.g. a real emergency or real casualty. The first words of any message is to contain the works exercise (nickname e.g.Red Flag) NO PLAY	
NOTHING HEARD	To be used when no reply is received from a call station.	ZGN
NUMBER	Station serial number.	NR
OUT	This is the end of my transmission to you and no answer is required or expected.	AR
OVER	This is the end of my transmission to you and a response is necessary. Go ahead, transmit	K
PRIORITY	Precedence PRIORITY	P
READ BACK	Repeat this entire transmission back to me exactly as received	G
REBROADCAST YOUR NET	Link the two nets under your control for automatic rebroadcast.	
RELAY (TO)	Transmit this message to all addressees (or addressees immediately following this proword). The address component is mandatory when this proword is used.	T or ZOF
RELAY THROUGH	Relay your message through call sign.....	ZOK
ROGER	This is a method of receipt. I have received your last transmission satisfactorily.	R
ROUTINE	Precedence ROUTINE.	R
SAY AGAIN	Repeat all of your last transmission. Followed by identification data means "Repeat..... (portion indicated)."	IMI
SEND YOUR	I am ready to receive your message, report, etc. (Used only in reply to the offer of a message, etc., on	K

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Proword	Explanation	Prosign/ OPSIG
	tactical or reporting nets.)	
SERVICE	The message that follows is a SERVICE message	SVC
SIGNALS	The groups which follow are taken from a signal book. (This proword is not used on nets primarily employed for conveying signals. It is intended for use when tactical signals are passed on non-tactical nets.)	
SILENCE (Repeated three or more times)	Cease transmissions on this net immediately. Silence will be maintained until lifted. (Transmissions must be authenticated by use of a self authenticated system, codeword, etc.)	HM HM HM
SILENCE LIFTED	Silence is lifted. (Transmissions must be authenticated by means of self authentication system, codeword, etc.)	ZUG HM HM HM
SPEAK SLOWER	Your transmission is too fast. Reduce speed of transmission.	QRS
STOP REBROADCASTING	Cut the automatic link between the two nets that are being rebroadcast and revert to normal working.	
THIS IS	This transmission is from the station whose designator immediately follows.	DE
THIS IS A DIRECTED NET	From now until further notice this net is directed.	ZKB
THIS IS A FREE NET	From now until further notice this net is directed.	ZUG ZKB
THROUGH ME	Relay your message through me	ZOE
TIME	That which immediately follows is the time or date-time group of the message.	QTR
TO	The addressees immediately following are addressed for action	TO
--TO--	The portion of the message to which I have reference is all that which appears between the groups.....and.....	
UNKNOWN STATION	The identity of the station with whom I am attempting to establish communication is unknown.	AA
USE ABBREVIATED CALL SIGNS	Call signs are to be abbreviated until further notice.	
USE ABBREVIATED PROCEDURE	As conditions are normal, all stations are to use abbreviated procedure until further notice.	
USE FULL CALL SIGNS	Call signs are to be sent in full until further notice	
USE FULL	As conditions are not normal, all stations are to use	

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Proword	Explanation	Prosign/ OPSIG
PROCEDURE	full procedure until further notice.	
VERIFY	Verify entire message (or portion indicated) with the originator and send correct version. (To be used only at the discretion of, or by, the addressee to which the questioned message was directed.)	J
WAIT	I must pause for a few seconds	AS
WAIT – OUT	I must pause for longer than a few seconds.	AS AR
WILCO	I HAVE RECEIVED YOUR SIGNAL, UNDERSTAND IT, AND WILL COMPLY. To be used only by the addressee. Since the meaning of ROGER is included in that of WILCO, the two prowords are never used together.	
WORD AFTER	The word of the message to which I have reference is that which follows.....	WA
WORD BEFORE	The word of the message to which I have reference is that which precedes.....	WB
WORDS TWICE	Communication is difficult. Transmit each phrase (or each code group) twice. (This proword may be used as an order, request, or as information.)	QSZ
WRONG	Your last transmission was incorrect. The correct version is.....	ZWF

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CHAPTER 4
DISCIPLINE

401. GENERAL

- a. Radio discipline is a fundamental ingredient of voice procedure without which a radio net cannot function efficiently. In addition to reducing communications efficiency and accuracy, inadequate radio discipline can result in a serious degradation of security standards.
- b. It is the commander's responsibility to impose and maintain discipline on a radio net. A commander may choose to exercise that responsibility through the control station. All radio nets or links must have a designated control station. In the absence of instructions to the contrary, the control station is that station serving the senior headquarters or location.
- c. During difficult conditions, net efficiency can deteriorate even more rapidly if the control station permits poor operating standards.

402. RULES FOR RADIO DISCIPLINE.

The following rules for radio discipline are mandatory on all radio nets. Every station must adhere to the following.

- a. Always:
 - (1) Use correct voice procedure.
 - (2) Maintain a constant listening radio watch unless specific instructions or permission has been received to the contrary. This requires that at least one person be nominated to monitor the radio regardless of the circumstances. All aspects of voice procedure are based on the assumption that stations will respond to the call immediately.
 - (3) Ensure that the correct frequency is in use.
 - (4) Answer calls in the correct order and without delay.
 - (5) Listen carefully before transmitting to ensure that the frequency is clear and, where possible allow for stations which cannot be heard.
 - (6) Release the pressel switch promptly.
 - (7) On releasing the pressel switch, ensure that the radio returns to the receive condition.
- b. Never:
 - (1) Violate radio silence.
 - (2) Compromise classified information by unauthorised plain language disclosure.
 - (3) Make unnecessary or unduly long transmissions.
 - (4) Engage in unofficial conversation or operator's chat.
 - (5) Identify an individual, ship or unit by name, or any other personal or individual sign.

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- (6) Speak faster than the station experiencing the worst reception conditions can be expected to receive, thus avoiding needless repetition.
- (7) Show loss of temper or resort to profane language.

403. RADIO LOGGING

- a. Whenever practical to do so, radio logs are to be maintained on all radio nets. Not all types of stations will be able to keep a full log. The operator in an armoured fighting vehicle is not expected to maintain a log as neatly or completely as say a watchkeeper in a ship or headquarters who is dedicated to a single task.
- b. Subject to the above, the radio log should contain a complete and continuous record of all transmitted and received messages, and information concerning the radio net. The log should be written legibly in the operator's own hand, and include all relevant details and timings of the following:
 - (1) All transmitted and received informal messages and voice conversations in full or, where this is impractical, the gist of a message in sufficient detail to provide adequate reference information. Operators should attempt to log messages between other users of the radio net, but it is accepted that the logging of traffic between third parties is likely to be of second priority during busy periods.
 - (2) The identity of formal messages written separately on a message form.
 - (3) The opening and closing of the radio stations on the net.
 - (4) Changes in operating frequency and interference reports.
 - (5) Sufficient reference data to identify all other calls or procedural messages transmitted or received on the net.
 - (6) Entries to the effect that the radio receiver is operating correctly in thereceive condition. (These should be made at regular intervals during periods of net inactivity.)
 - (7) Reports of stations with whom contact is difficult or suspect, amplified with any corrective action taken.
 - (8) Unusual occurrences such as procedural or security violations, or suspected deception or jamming. Entries should include the reporting action taken.

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- (9) Handover and takeover by the radio station operators. The receiving operator is to record his rank, name and signature to the effect that the transfer has been completed satisfactorily. Unless other arrangements exist, this signature is also to confirm that a complete check of any classified material has been made.

- c. Good log keeping is an essential part of the efficient operation of a radio station, particularly at Control where the operator is responsible for other stations on the net.

- d. Radio logs to be held in safe keeping in accordance with national / theatre / command instructions.

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CHAPTER 5

MESSAGES

501. PLAINDRESS

- a. A plaindress message is one in which the originator and addressee designators are indicated externally of the text.
- b. A plaindress message contains all the components (unless the call serves as the address) as shown in the basic message format and must always include the precedence and date-time group.
- c. The group count will always be included when the accounting symbol is employed.

502. ABBREVIATED PLAINDRESS

- a. Operational requirements for speed of handling may require abbreviation of plaindress headings. In such case, any or all of the following may be omitted:
 - (1) Precedence.
 - (2) Date.
 - (3) Date-time group.
 - (4) Group count.

503. CODRESS

A codress message is one in which the entire address (i.e., originator and all addressees, including address indicating groups when used), is encrypted within the text. The heading of such a message contains only information necessary to enable communication personnel to handle it properly. It contains all other components shown in the schematic diagram, paragraph 510.

504. SERVICE MESSAGE

- a. A service message is one between communications personnel and pertaining to any phase of traffic handling, communications facilities, or circuit conditions.
- b. An encrypted service message will always carry a numerical group count and will be identified as a service message only within the encrypted text.
- c. Plain-language service messages are identified by the proword SERVICE (paragraph 517).
- d. Service messages may be prepared and transmitted in plaindress, abbreviated plaindress, or codress form. They generally concern messages originated at, destined for, or refiled by, the station originating the service message, and will normally be assigned a precedence equal to that of the message to which they refer.

505. ABBREVIATED SERVICE MESSAGE

An abbreviated service message is one between operators, which may be required to facilitate traffic handling. This type of message contains only prowords, address designators, identification of messages, parts of messages, and amplifying data as necessary. An abbreviated service message may be transmitted using plaindress or abbreviated plaindress procedure. It is not identified and need not be authorised in the same manner as a service message.

506. INFORMAL MESSAGES

Informal messages are those tactical, operational and service messages commonly sent on user operated circuits, e.g., field tactical and air control. These types of traffic tend to utilise a more conversational procedure. Informal messages tend to contain any element of the basic message format (table in paragraph 510), however, they will normally only consist of a call, a text, and an ending, i.e., format lines 2, 3, 12 and 15. All elements used are to be in the sequence described in the basic message format, and when used, time groups sent in format line 14 would normally be time of transmission rather than time of origin.

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507. CLASSIFICATION OF SERVICE AND ABBREVIATED SERVICE MESSAGES

- a. An unclassified service or abbreviated service message may be used when referring to a classified message if only prowords and message or transmission identifications are used. If it is necessary to include anything that would reveal part of the plain language text of the classified message, however, the service or abbreviated service message must be classified.
- b. An unclassified service or abbreviated service message referring to a message received in codress form, or using encrypted call signs or address groups, shall use only those message or transmission identifications which were contained in the external message heading as received.

508. LONG MESSAGE PROCEDURE

Long Message Procedure is required to reduce time spent on the air and allow another station to break in with precedence traffic if required. Transmission length should be no longer than 20 seconds in any one transmission.

Example:

Nine Two – THIS IS – Six Nine – Long Message – OVER

THIS IS – Nine Two – Send – OVER

THIS IS – Six Nine – Text (transmit for 20 seconds maximum)– ROGER so far – OVER

THIS IS – Nine Two – ROGER – OVER

Six Nine pauses for approximately 5 seconds to allow another station to break in if required.

THIS IS – Six Nine – Text (continue with remainder of message, again transmitting in 20 second periods repeating the procedure as necessary to transmit the entire message). – OVER

On completion of entire transmission receiving station (Nine Two) will receipt, obtain repetitions or confirmations as necessary as normal.

509. MESSAGE FORMAT

Each message shall be prepared in plaindress, abbreviated plaindress, or codress form except when a commercial or International Civil Aviation Organisation form is authorised.

- a. Each message prepared in either plaindress, abbreviated plaindress, or codress will have three PARTS:
 - (1) Heading.
 - (2) Text.
 - (3) Ending.
- b. Each message PART has certain COMPONENTS which are broken down into ELEMENTS and CONTENTS.
 - (1) All message PARTS and a majority of the COMPONENTS and ELEMENTS have a standardised arrangement or sequential order of appearance.
 - (2) In the schematic diagram (paragraph 510), format lines 2, 3, 4, 14, and 16 identify the procedural portion of the basic message format as designed for radiotelephone operation. Lines 5 through 13 are the unchangeable elements of the basic format. Not all format lines necessarily appear in every message; however, when used, they will be in the order indicated.

510. SCHEMATIC DIAGRAM OF MESSAGE FORMAT

In the following diagram, note that every ELEMENT is indicated in the order of appearance in the message, but the contents of the various ELEMENTS are not necessarily indicated, as they will appear.

PART	COMPONENT	ELEMENT	FORMAT LINE	CONTENT
Heading	Procedure		1	Not used.
		a. Call	2 & 3	Stations Called.
				Proword INFO, to identify info addressees

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				in abbreviated plaindress messages. Proword EXEMPT, to identify exempted addressees. Proword THIS IS, to identify the station calling.
		b. Message follows		Proword MESSAGE
		c. Transmission Identification		Proword NUMBER and station serial number
		d. Transmission Instructions	4	Prowords. RELAY TO, READ BACK, DO NOT ANSWER, WORDS TWICE; operating signals, address groups, call signs, plain language designators.
	Preamble	a. Precedence, Date-Time Group, Message Instructions	5	Precedence designation, Proword TIME; date and time expressed in digits, and zone suffix, month indicated by the first three letters, and, if required by national authorities the year indicated by the last two digits, operating signals and proword EXECUTE TO FOLLOW or IMMEDIATE EXECUTE.
	Address	a. Originator	6	Proword FROM. Originator's address designator.
		b. Action Addressees	7	Proword TO. Action addressees designators.
		c. Information Addressees	8	Proword INFO. Information addressees designators.
		d. Exempted Addressee	9	Proword EXEMPT. Exempted addressees

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				designators.
	Prefix	a. Accounting Information, Group count	10	Accounting symbol; group count; Proword GROUPS (GROUP NO COUNT).
Separation			11	Proword BREAK
Text	Text	a. Subject Matter	12	CLEAR, UNCLASSIFIED, proword SERVICE, and/or internal instructions as appropriate; thoughts or ideas as expressed by the originator.
Separation			13	Proword BREAK
Ending	Procedure	a. Time Group	14	Proword TIME. Hours and minutes expressed in digits and zone suffix, when appropriate.
		b. Final Instructions	15	Prowords AUTHENTICATION IS, CORRECTION, I SAY AGAIN, MORE TO FOLLOW, STANDBY EXECUTE, WAIT; operating signals, address groups; call signs; and plain language designators.
		c. Ending Sign	16	Prowords OVER, OUT.

511. FORMAT LINES 2 AND 3 (CALLING AND ANSWERING)

- a. These lines will contain the call, the proword MESSAGE, and the transmission identification
- b. The Call. The call of a message serves to identify the stations between which that particular message is being transmitted. It may also serve as the address of the message when the designators of the originator and

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addressees are the same as the call signs of the stations in communication with each other on the same circuit.

c. The call may take one of the following forms:

(1) Full Call

Yankee One Three Charlie - Call sign of receiving station

THIS IS - From

Zulu Three Four Delta - Call sign of transmitting station

(2) Abbreviated Call. The call sign of the called station may be omitted when a call is part of an exchange of transmissions between stations and no ambiguity will result.

THIS IS - From

Sabine Raider - Call sign of transmitting station

(3) For speed of working when conditions are good, particularly on large nets, the receiving station may omit the proword THIS IS when responding to a call or receipting for a transmission.

(4) When two stations are in continuous communication with each other on a net not shared by a third station, the call may be omitted entirely, provided no confusion would result. For ground forces use, this provision may apply to any two stations within the same net which are in continuous communications with each other. However, in either of the foregoing instances, the requirement for periodic identification as set forth in appropriate national and/or international regulations must be adhered to, as far as possible.

(5) An aeronautical station may acknowledge an aircraft message by transmitting the identification of the aircraft.

d. The call may contain:

(1) Individual call signs identifying stations (addressees) separately.

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- (2) Collective call signs identifying a predetermined group of stations (addressees).
 - (3) A combination of both individual and collective call signs.
 - (4) Net call sign identifying all stations on a given net.
- e. The call may be of two types:
- (1) Single call – only one call sign precedes the proword THIS IS. This may be an individual, collective or net call sign.

Example:

Using an individual call sign.

Delta Three Eight One this Zulu Three Four Delta – OVER

- (2) Multiple call – two or more call signs precede the proword THIS IS. These may be individual and/or collective and/or net call signs.

Example:

Using two individual call signs.

Damp Lion – Hollow Piston THIS IS Sabine Raider – OVER

- f. When the call serves as the address and a collective call sign is used and there are exempted addressees in the message, such addressees can be exempted in the call by use of the proword EXEMPT followed by the call sign of the stations exempted.

Example:

Yankee One Three Charlie EXEMPT Foxtrot One Seven Eight THIS IS Zulu Three Four Delta – OVER

- g. Message – The proword MESSAGE may be transmitted immediately following the call to indicate that a message that requires recording is about to follow.
- h. Transmission Identification – A transmission identification is not normally used on voice nets but, if required, it will be the last element of format

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lines 2 and 3 and will consist of the station serial number preceded by the
proword NUMBER.

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512. FORMAT LINE 4 (TRANSMISSION INSTRUCTIONS)

This line contains the transmission instructions which may consist of prowords WORDS TWICE, RELAY (TO), DO NOT ANSWER, or READ BACK. The use of these prowords is explained in paragraphs 613b, 614, 619 and 620.

513. FORMAT LINE 5 (PREAMBLE)

This line will contain the precedence, date-time group, and message instructions:

- a. Precedence – The appropriate precedence designation is transmitted as the first element of format line 5. In the case of dual-precedence messages, the higher precedence designation will be transmitted first.
- b. Date-Time Group – The proword TIME followed by the date-time group and zone suffix, month indicated by the first three letters and if required by national authorities, the year indicated by the last two digits is transmitted immediately after the precedence designation. An abbreviated plaindress message may carry no date-time group, or a time group transmitted in line 14 may replace the date-time group.

Example:

Hotel Seven Nine Five – THIS IS Alfa One Nine Two – RELAY TO Bravo Four Two Zero – PRIORITY – TIME Zero Seven One Six Three Zero Zulu.....

- c. Message Instructions – These should not normally be required on radiotelephone messages. When included, they will consist of short and concise instructions, which will remain with the message to the station of destination.

Example:

THIS MESSAGE IS A SUSPECTED DUPLICATE

514. FORMAT LINES 6, 7, 8 AND 9 (ADDRESS)

These lines form the address of the message and are recognised by the prowords FROM, TO, INFO and EXEMPT, respectively. When the originator and the addressees are in communication with each other on the same circuit, the call will serve as the address.

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Example A:

Plaindress message heading showing all possible elements of the address component (assuming abbreviated call signs are in use):

Transmission	Explanation
Three Charlie.....	Collective call sign of stations called
THIS IS.....	From
Four Delta.....	Call sign of station calling
MESSAGE.....	A message that requires recording is about to follow
PRIORITY.....	Precedence designation
TIME.....	The time of origin is
One Two	
One Six	
Thee Zero	
Zulu JAN.....	Date-time group (121630Z JAN)

Address

FROM.....	The originator of this message is
Four Delta.....	Call sign of originator
TO.....	The action addressee is
Three Charlie.....	Collective call sign of action addressees
INFO.....	The information addressee is
Two Zero.....	Call sign of information addressee is
EXEMPT.....	The exempted addressee is
Seven Eight.....	Call sign of exempted addressee

Example B:

Abbreviated plaindress message showing three elements in the address component (assuming abbreviated call signs are in use):

Transmission	Explanation
Eight One.....	Call sign of receiving station
THIS IS.....	From
Zero Six.....	Call sign of calling station

Address

FROM.....	The originator of this message is
Zero Six.....	Call sign of originator
TO.....	The action addressee is

Two Zero.....Call sign of action addressee (not on net)
 INFO.....The information addressee is
 Eight one.....Call sign of information addressee

Example C:

Abbreviated plaindress message with call sign serving as the address, action addressees only (assuming abbreviated call signs are in use):

Transmission	Explanation
	Call and address
Oven.....	Call sign of receiving station and action addressee
THIS IS.....	From
Piston.....	Call sign of station calling and originator of the message
PRIORITY.....	Precedence designation
Text.....	Subject matter
TIME.....	Time of origin is
One Two	
Three Four Zulu.....	Time group

Example D:

Abbreviated plaindress message with the call sign serving as the address, action and information addressees (assuming abbreviated call signs are in use):

Transmission	Explanation
	Call and address
Six Nine.....	Call sign of station called and action addressee
INFO.....	The information addressee is
Eight One.....	Call sign of station called and information addressee
THIS IS.....	From
Zero Six.....	Call sign of station calling and originator of the message
Text.....	Subject matter
TIME.....	Time of origin is
One Eight	
Two Four Zulu.....	Time group

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Note: When the call sign serves as the address, a full call sign is mandatory when transmitting the message even though a preliminary call may have been used to ascertain that stations were ready to receive.

515. FORMAT LINE 10 (PREFIX)

- a. This line is identified by the proword **GROUPS** followed by the number of groups, or **GROUPS NO COUNT**. It may contain an accounting symbol in addition to the group designation.
 - (1) Accounting Information – Accounting symbols are seldom used on messages transmitted over radiotelephone circuits. However, they may appear on messages received for relay from circuits employing other procedures and should be recognised as such. These accounting symbols are a combination of letters used to indicate the agency, service, or activity, which assumed financial responsibility for the message.
 - (2) Group Count – Radiotelephone messages are usually short and a group count is seldom used. However, the number of groups if sent will be preceded by the proword **GROUPS** and will normally appear in the message prefix. When a message is transmitted before the group count is determined, the prowords **GROUPS NO COUNT** will be used in lieu of the group count. The actual group count may then be transmitted in the final instructions and be inserted in the message prefix by the receiving operator. The prowords **GROUPS NO COUNT** will be included in messages bearing an accounting symbol when groups are not counted.
- b. Some tactical codes require that the group count be transmitted at the end of the text rather than in format line 10. In such cases, format line 10 is not used and the group count is transmitted in accordance with the operating instructions for the code.

516. FORMAT LINE 11 (SEPARATION)

This line contains the proword **BREAK**, separating the text from the heading. It is used only when confusion between the heading and the text is likely.

517. FORMAT LINE 12 (TEXT)

This is the text of the message and may contain, prior to the thoughts or ideas as expressed by the originator, the word UNCLASSIFIED or the word CLEAR if specifically authorised (ACP121), the proword SERVICE, and internal instructions.

518. FORMAT LINE 13 (SEPARATION)

This line contains the proword BREAK, separating the text from the ending. It is used only when confusion between the text and the ending is likely.

519. FORMAT LINE 14 (TIME GROUP)

This line is used only in abbreviated plaindress messages when a time group transmitted here takes the place of a date-time group in line 5. It consists of the proword TIME followed by the time group plus the zone suffix.

520. FORMAT LINE 15 (FINAL INSTRUCTIONS)

May contain prowords (such as AUTHENTICATION IS, CORRECTION, I SAY AGAIN, MORE TO FOLLOW, STANDBY EXECUTE, WAIT) operating signal, address groups, call signs, and plain-language designators.

521. FORMAT LINE 16 (ENDING SIGN)

This line is identified by the prowords OVER or OUT:

- a. Every transmission shall end with either the proword OVER or the proword OUT, except that the proword OVER may be omitted when two stations are in continuous communication with each other on a net not shared with a third or, in the case of ground forces, where two stations within the same net are in continuous communication with each other where confusion will not arise.
- b. In all transmissions where the proword DO NOT ANSWER is used, the transmission shall be ended with the proword OUT.

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CHAPTER 6

OPERATING RULES

601. GENERAL

- a. To use circuit time more efficiently, all messages or their substance should be written down prior to transmission. Those messages which must be delivered by the receiving operator to another person, or which are preceded by the proword MESSAGE, shall be written down.
- b. Transmissions by radiotelephone shall be as short and concise as practicable, consistent with clarity. The use of standard phraseology enhances brevity.
- c. Radio telephone transmissions should be clear, with natural emphasis on each word except the prescribed pronunciation of a numeral, and should be spoken in natural phrases, not word by word.
- d. If it is technically practical, the operator shall, during the transmission of a message, pause after each natural phase and interrupt his transmission (carrier) momentarily, to allow another station to break in if necessary.
- e. To avoid interfering with other traffic, an operator shall listen to make certain that a circuit is clear before making any transmission.
- f. When it is necessary for a station to initiate test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals will not continue for more than 10 seconds and will be composed of spoken numerals (1, 2, 3 etc.) followed by the call sign of the station transmitting the signals.

602. AUTHENTICATION

When authentication is required, it will be carried out in accordance with the authentication system in force.

603. ESTABLISHING COMMUNICATIONS

- a. Full call signs must be used when establishing communications.
- b. Before passing traffic it may be necessary to establish the reception conditions for all stations.

Example A (Good conditions):

Z34D transmits:

Alfa One Nine Two – THIS IS Zulu Three Four Delta – OVER

A192 answers the initial call:

THIS IS Alfa one Nine Two

Z34D having nothing for A192, transmits:

Alfa One Nine Two – THIS IS Zulu Three Four Delta – OUT.

Example B (Difficult conditions);

Z34D transmits:

Alfa One Nine Two – Alfa One Nine Two – THIS IS Zulu Three Four Delta – Zulu Three Four Delta – RADIO CHECK – OVER

A192 transmits:

Zulu Three Four Delta – Zulu Three Four Delta – THIS IS Alfa One Nine Two – Alfa One Nine Two – WEAK BUT READABLE – OVER

Z34D, having nothing for A192, transmits:

Alfa One Nine Two – THIS IS - Zulu Three Four Delta – ROGER – OUT

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604. SEQUENCE OF CALL SIGNS AND/OR ADDRESS GROUPS

The following rules govern the sequence of call signs and/or address groups in calling and answering and of those included in components of messages.

- a. Call signs and/or address groups in message headings will ordinarily be arranged in alphabetical order in the form in which they are to be transmitted, whether plain or encrypted. For this purpose, / (slant) and figures 1 through 0 will be considered the twenty-seventh through thirty-seventh letters of the alphabet. Care must be exercised to avoid separating groups of related call signs and/or conjunctive address groups that are interdependent.
- b. When abbreviated call signs are used on a net, the sequence of answering a collective call is to be the same as if full call signs were in use. This avoids any confusion that may arise when changing from full to abbreviated call signs.
- c. If several stations are called in one transmission and one fails to answer in its turn, the next in turn answers after a 5-second pause. The defaulting station then answers last, if able to do so.

605. ESTABLISHING A NET

The use of procedure as prescribed herein shall be followed either when opening a net for the first time or when reopening a net. Proper control by the net control station (NCS) and adherence to operating rules by all stations within the net enable the net to begin and maintain an exchange of traffic with minimum delay. The NCS is also responsible for maintaining security on its net. Appropriate security guidance will be furnished by the NCS to all stations prior to establishing a net.

Example A:

At a designated time or when ready to establish the net, Z34D transmits:

Yankee One Three Charlie – THIS IS – Zulu Three Four Delta – OVER

Each subordinate station then answers the call in alphanumeric order:

THIS IS - Alfa One Nine Two – OVER

THIS IS - Charlie Two Zero Six – OVER

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THIS IS - Delta Three Eight One – OVER

THIS IS - Echo Nine Six Nine – OVER

THIS IS - Foxtrot One Seven Eight – OVER

THIS IS - Hotel Seven Nine Five – OVER

The NCS now calls the net to inform all stations that their transmissions have been heard and that he has no traffic for them

THIS IS - Zulu Three Four Delta – OUT

Example B:

In this example, the subordinate station E969 is unable to answer the collective call. Z34D transmits:

Yankee One Three Charlie – THIS IS Zulu Three Four Delta – OVER

The first three stations then answer;

THIS IS - Alfa One Nine Two – OVER

THIS IS – Charlie Two Zero Six – OVER

THIS IS – Delta Three Eight One – OVER

F178, hearing no answer from E969, waits approximately 5 seconds and then transmits:

THIS IS – Foxtrot One Seven Eight – OVER

H795 follows on:

THIS IS – Hotel Seven Nine Five – OVER

After receiving answers from all stations except E969, Z34D transmits:

THIS IS Zulu Three Four Delta – ROGER – Echo Nine Six Nine –
NOTHING HEARD – OUT

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E9969, when able to transmit, calls the NCS to report into the net:

Zulu Three Four Delta – THIS IS – Echo Nine Six Nine – Reporting into net – OVER

Z34D transmits:

Echo Nine Six Nine – THIS IS – Zulu Three Four Delta – AUTHENTICATE..... - OVER

E969 transmits:

THIS IS – Echo Nine Six Nine – I AUTHENTICATE..... - OVER

Z34D transmits:

THIS IS – Zulu Three Four Delta – ROGER – OUT

606. ESTABLISHING COMMUNICATIONS

- a. Once the net has been established, it will normally work using abbreviated procedures and call signs as follows. The NCS may, however, order the net to revert to full procedures and call signs as dictated by the prevailing conditions.
 - (1) The proword THIS IS will normally be omitted from all calls
 - (2) Callsigns will be abbreviated IAW ACP 135
 - (3) Initial calls are optional IAW Para 613.
- b. Full Procedure. With full procedure, the use of prowords and call signs that were previously optional becomes mandatory.
 - (1) If, when establishing the net, the NCS judges that conditions are such that the use of abbreviated procedure will cause unnecessary repetitions, the NCS orders the use of full procedure.

Example:

Once the net has been established, the NCS transmits:

Yankee One Three Charlie – THIS IS – Zulu Three Four Delta – USE FULL PROCEDURE – OUT

- (2) If the net is working using abbreviated procedure and conditions deteriorate to such a degree that excessive repetitions are required, the NCS will order the use of full procedure.

Example:

The NCS orders the use of full procedure (assuming full call signs are in use);

Yankee One Three Charlie – THIS IS – Zulu Three Four Delta – USE FULL PROCEDURE – OVER

Each station answers in turn using full procedure:

Zulu Three Four Delta – THIS IS – Alfa One Nine Two – ROGER – OUT

Zulu Three Four Delta – THIS IS – Charlie Two Zero Six – ROGER – OUT

(The other stations on the net acknowledge in turn).

- c. Reverting to Abbreviated Procedure. When conditions return to normal, the NCS is to order that the net return to abbreviated procedure.

Example:

The NCS orders the use of abbreviated procedure (assuming abbreviated call signs are in use):

Three Charlie – THIS IS – Four Delta – USE ABBREVIATED PROCEDURE – OVER

Each station answers in turn using abbreviated procedure

THIS IS – Nine Two – ROGER – OUT

THIS IS – Zero Six – ROGER – OUT

- d. Full Call Signs. On establishing a net or at any other time when conditions require it, the NCS may order the use of full call signs in the same manner as for full procedure by using the proword USE FULL CALL SIGNS.

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- e. Abbreviated Call Signs. When conditions have returned to normal, the NCS will order the net to revert to the use of abbreviated call signs in the same manner as for abbreviated procedure by using the proword USE ABBREVIATED CALL SIGNS. When ordered to use abbreviated call signs, the net must continue to use either full or abbreviated procedure, whichever is in force.

Example:

The NCS orders the use of abbreviated call signs when full procedure is in force:

Three Charlie – THIS IS – Four Delta – USE ABBREVIATED CALL SIGNS – OVER

Each station answers in turn using abbreviated call signs but continuing to use full procedure:

Four Delta – THIS IS – Nine Two – ROGER – OUT

Four Delta – THIS IS – Zero Six – ROGER – OUT

- f. Full Procedure and Full Call Signs:

- (1) Conditions may be such that the NCS considers the use of both full procedure and full call signs necessary for the efficiency of the net. In this case, it will direct the net as follows:

USE FULL CALL SIGNS AND FULL PROCEDURE – OVER

- (2) When conditions warrant it, the NCS may subsequently order the net to use abbreviated call signs as shown in the above example or may order the net to abbreviate completely using the prowords USE ABBREVIATED CALL SIGNS and ABBREVIATED PROCEDURE.

607. ESTABLISHING A NET (TUNING)

- a. Z34D wishes to establish a net on a new frequency. At the time arranged for establishing communication, Z34D listens on the frequency and, finding it clear, transmits:

Yankee One Three Charlie – Yankee One Three Charlie – THIS IS Zulu Three Four Delta – Zulu Three Four Delta – Am about to transmit a tuning

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signal – Zulu Three Four Delta – Zulu Three Four Delta (for 20 seconds) – NET NOW (holds down press-to-talk switch for 10 seconds) – OUT

- b. After allowing time for stations to adjust their transmitters, Z34D will establish communication as in paragraph 605. If any stations are off frequency, they will be given further tuning as follows:

Delta Three Eight One – THIS IS Zulu Three Four Delta – You are five kilohertz low

- Zulu Three Four Delta (for 20 seconds) – NET NOW – (hold down press-to-talk switch for 10 seconds) – OUT

Z34D transmits:

Delta Three Eight One – THIS IS – Zulu Three Four Delta – OVER

D381 transmits:

THIS IS – Delta Three Eight One – OVER

Z34D transmits:

Yankee One Three Charlie – THIS IS – Zulu Three Four Delta – OUT

608. DIRECTING A SHIFT IN FREQUENCY

- a. As with all other activities that change the characteristics of a net, a shift in frequency should be disguised as much as possible in the interest of communications security. Signal instructions for the net should, wherever possible, provide agreed nicknames to be used for foreseeable changes in frequency. If these are available, the following procedure will be used:

Example

The NCS changes the net to a new frequency using the nickname BLUE

TABLE:

Three Charlie – THIS IS – Four Delta – BLUE TABLE – OVER

Each subordinate station answers in turn:

THIS IS - Nine Two – ROGER – OVER

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THIS IS – Zero Six – ROGER – OVER

The NCS transmits the order to change:

THIS IS – Four Delta – BLUE TABLE now – OUT

- b. If the change is not planned or if there is no agreed nickname, the change is to be directed using a frequency designator. In such cases, authentication must be used.

Example A:

The NCS directs the net to change to a new frequency using the designator B11, where a transmission authentication system is in use:

Three Charlie – THIS IS – Four Delta – Change to Frequency Bravo One One – TIME 1816 – AUTHENTICATION IS..... – OVER (the time of authentication may be given if considered necessary depending on instructions for the authentication system in use).

Having verified the authentication, the subordinate stations answer in turn:

THIS IS – Nine Two – ROGER – OUT

THIS IS – Zero Six – ROGER – OUT, etc.

Example B:

The NCS changes the net to a new frequency using the designator B11 where a transmission authentication system is not in use:

Three Charlie – THIS IS – Four Delta – Change to Frequency Bravo One One – OVER

The first station to reply seek authentication:

THIS IS – Nine Two – AUTHENTICATE (challenge components) – TIME One Eight One Six - OVER (The time of authentication may be given if considered necessary, depending on instructions for the authentication system in use.)

The NCS Authenticates:

THIS IS – Four Delta – I AUTHENTICATE..... – OVER

The first station acknowledges both the authentication and the order to change frequency:

THIS IS – Zero Six – ROGER – OUT

THIS IS – Eight One – ROGER – OUT, etc.

- c. When the shift has been executed, the NCS will decide whether it is necessary under the conditions to check that the net has been re-established on the new frequency. In the interests of communications security, this should only be done if the NCS considers that the net may not be fully working for some reason. If the NCS does decide to re-establish the net, it will be done as described in paragraph 605

609. DIRECTED AND FREE NETS

- a. The type of net and method of operation is determined from consideration of operational factors involved.
 - (1) Free Net – In this type of net, the net control station (NCS) authorises member stations to transmit traffic to other stations in the net without obtaining prior permission from the NCS. Free net operation does not relieve the control station of the responsibility for maintaining circuit discipline.
 - (2) Directed Net – In this type of net, stations obtain permission from the NCS prior to communicating with other stations in the net. Permission is not required for the transmission of FLASH messages, which shall be sent direct. Transmissions on a directed net may also be accomplished in accordance with predetermined schedules.
- b. A net is deemed to be a free net unless otherwise ordered. When it is required to change a free net to a directed net, or vice versa, one of the prowords THIS IS A FREE NET or THIS IS A DIRECTED NET shall be used by the NCS.
- c. Directed Nets:
 - (1) The following example illustrates the manner in which the NCS announces that the net is directed and requests the amount and precedence of traffic to be transmitted (assuming abbreviated call signs are in use).

Example:

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Z34D transmits:

Three Charlie – THIS IS – Four Delta – THIS IS A DIRECTED NET – of what precedence and for whom are your messages – OVER

Each subordinate station then answers in the alphanumeric order of his full call sign, indicating traffic on hand:

THIS IS – Nine Two – One IMMEDIATE and one ROUTINE for you – OVER

THIS IS - Zero Six – No Traffic – OVER

THIS IS – Eight One – ROUTINE for Nine Two – OVER

THIS IS – Six Nine – PRIORITY for Nine Five – OVER

THIS IS – Seven Eight – No Traffic – OVER

THIS IS – Nine Five – No Traffic – OVER

Z34D then informs the stations that their transmissions have been heard and commences to clear traffic in order of precedence:

Three Charlie – THIS IS – Four Delta – ROGER – Nine Two – Send your IMMEDIATE – OVER

After A192 completes his IMMEDIATE to Z34D, the NCS orders the station with the next highest precedence message to transmit his message:

Six Nine – THIS IS – Four Delta – Send your PRIORITY – OUT

H795, hearing this authorisation, tells E969 to go ahead:

THIS IS – Nine Five – OVER

(Failure of H795 to answer immediately would necessitate E969 making a preliminary call to H795.)

Nine Five – THIS IS – Six Nine – PRIORITY – TIME, etc.

After H795 receipts for the message and transmits the proword OUT, the NCS continues to authorise stations to transmit their messages in order of precedence until his traffic list is cleared.

- (2) When the traffic list is cleared, stations having messages to transmit should call the NCS and request permission to transmit.

Example:

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H795, having one ROUTINE message for C206, transmits:

Four Delta – THIS IS – Nine Five – ROUTINE for Zero Six – OVER

Z34D transmits:

THIS IS Four Delta – send your message – OUT or, if higher precedence traffic is awaiting transmission, THIS IS Four Delta – WAIT – OUT

When circuit conditions permit, Z34D informs H795 that they may transmit their message:

Nine Five – THIS IS – Four Delta – Send your message – OUT

C206, hearing the authorisation, should then transmit:

THIS IS Zero Six – OVER

This is in order to avoid requiring H795 to make a preliminary call. H795 then proceeds with the transmission of their ROUTINE message.

610. DELEGATING AND ASSUMING NET CONTROL

- a. It may be necessary for net control to be delegated to a subordinate station when effective net control cannot be maintained by the NCS or when the NCS has to leave the net for any reason. In such cases, the proword ASSUME CONTROL is to be used.

Example:

The NCS is closing down for 30 minutes and decides that D381 is in the best position to assume net control. He transmits:

Three Charlie – THIS IS – Four Delta – Am closing down for three zero minutes – Eight One – ASSUME CONTROL – TIME One Eight Three Zero Zulu – AUTHENTICATION IS..... – OVER

The subordinate stations answer in turn:

THIS IS - Nine Two ROGER – OUT

THIS IS – Zero Six – ROGER – OUT

THIS IS – Eight One – WILCO – OUT

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THIS IS – Six Nine – ROGER – OUT

THIS IS – Seven Eight – ROGER – OUT

THIS IS – Nine Five – ROGER – OUT

- b. Other occasions may arise where the NCS is not in a position to give warning that he is leaving the net. In such cases, the senior subordinate station will normally assume net control but, before he does so, he must confirm that other stations on the net cannot hear the NCS

Example:

Nothing has been heard from the NCS. E969, as the senior subordinate station, transmits:

Three Charlie – THIS IS – Six Nine – Have you heard anything from Four Delta

There is no reply from the NCS, and the other stations transmit:

THIS IS – Nine Two – NOTHING HEARD – OVER

THIS IS – Zero Six – NOTHING HEARD – OVER

E969 then transmits:

THIS IS – Six Nine – NOTHING HEARD from Four Delta – I AM ASSUMING CONTROL – OVER

Subordinate station reply in order:

THIS IS – Nine Two – ROGER – OUT

THIS IS – Zero Six – ROGER – OUT, etc.

- c. When the NCS re-joins the net, he does so using the proword I AM ASSUMING CONTROL and must give authentication:

Example:

The NCS wishes to resume control of the net and transmits:

Three Charlie – THIS IS – Four Delta – I AM ASSUMING CONTROL –
TIME One Eight Three Zero Zulu – AUTHENTICATION IS..... –
OVER

The subordinate stations reply in order:

THIS IS – Nine Two – ROGER – OUT

THIS IS – Zero Six – ROGER – OUT, etc.

611. RADIO CHECKS, SIGNAL STRENGTH AND READABILITY

- a. A station is understood to have good signal strength and readability unless otherwise notified. Strength of signals and readability will not be exchanged unless one station cannot clearly hear another station.
- b. A station that wishes to inform another of his signal strength and readability will do so by means of a short and concise report of actual reception such as, WEAK BUT READABLE, LOUD BUT DISTORTED, WEAK WITH INTERFERENCE, etc. Reports such as “five by five,” “four by four,” etc., will not be used to indicate strength and quality of reception.
- c. The prowords listed below are for use when initiating and answering queries concerning signal strength and readability:

(1) General:

RADIO CHECK

What is my signal strength and readability; how do you hear me?

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. If reception is other than loud and clear, it must be described with the prowords for (2) and (3) below.

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NOTHING HEARD To be used when no reply is received from a called station.

(2) 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 At times your signal strength fades to such an extent that continuous reception cannot be relied upon.

(3) Report of Readability:

CLEAR The quality of your transmission is excellent.

READABLE The quality of your transmission is satisfactory.

UNREADABLE The quality of your transmission is so bad that I cannot read you.

DISTORTED Having trouble reading you due to interference.

WITH INTERFERENCE Having trouble reading you due to interference.

INTERMITTENT Having trouble reading you because your signal is intermittent.

d. Example (Assuming Abbreviated Call Signs Are in Use):

Z34D desires a radio check with Y13C and transmits:

Three Charlie – THIS IS – Four Delta – RADIO CHECK – OVER

All stations of the collective call hear Z34D loud and clear except C206 and D381. The replies of each station, in order, are:

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THIS IS – Nine Two – ROGER – OVER

THIS IS – Zero Six – READABLE – OVER

THIS IS – Eight One – WEAK WITH INTERFERENCE – OVER

THIS IS – Six Nine – ROGER – OVER

THIS IS – Seven Eight – ROGER – OVER

THIS IS – Nine Five – ROGER – OVER

Z34D indicates his reception of each of the called stations was loud and clear except for C206, who was distorted, and D381, who was not heard, by replying:

THIS IS – Four Delta – ROGER – Zero Six DISTORTED – Eight One – NOTHING HEARD – OVER

In the event Z34D hear all stations loud and clear, the reply would have been:

THIS IS – Four Delta – ROGER –OUT

612. PRELIMINARY CALLS

When communication is difficult or when the calling station wishes to ascertain whether the station called is ready to receive a message, a preliminary call will be sent before transmitting a message.

Example A:

C206 wishes to transmit a message to E969 and desires to know if E969 is ready to accept it. C206 transmits:

Six Nine – THIS IS – Zero Six – MESSAGE – OVER

E969, ready to accept the message, transmits:

THIS IS – Six Nine – SEND YOUR MESSAGE – OVER

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C206 transmits:

THIS IS – Zero Six – ROUTINE, etc.

Example B:

D381 wishes to transmit a message to H795 and desires to know that H795 is ready to accept it. D381 transmits:

Nine Five – THIS IS – Eight One – PRIORITY – OVER

H795, not prepared to accept the traffic immediately transmits:

THIS IS – Nine Five – WAIT

After a short pause, H795 is ready and transmits:

THIS IS – Nine Five – SEND YOUR PRIORITY – OVER

Note: If H795's delay had been longer than a few seconds, H795 would have transmitted:

THIS IS – Nine Five – WAIT – OUT

When ready to accept the message, H795 would transmit:

Eight One – THIS IS – Nine Five – SEND YOUR PRIORITY – OVER

613. TRANSMITTING A MESSAGE

- a. Communications Good. When communication reception is satisfactory, message parts need to be transmitted only once and preliminary calls are optional.

Example A:

Z34D transmits:

Seven Eight – THIS IS Four Delta – PRIORITY – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

F178, having received the transmission satisfactorily, transmits:

THIS IS – Seven Eight – ROGER – OUT

Example B:

F178, having missed the transmission, transmits:

THIS IS – Seven Eight – SAY AGAIN – OVER

Z34D transmits:

THIS IS – Four Delta – I SAY AGAIN – (Seven Eight – THIS IS Four Delta) – PRIORITY – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

F178 transmits:

THIS IS – Seven Eight – SAY AGAIN ALL AFTER Convoy – OVER

Z34D transmits:

THIS IS – Four Delta – I SAY AGAIN ALL AFTER Convoy – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

F178 transmits:

THIS IS – Seven Eight – ROGER – OUT

- b. Communications Difficult. When communication is difficult, call signs should be transmitted twice. Phrases, words, or groups may be transmitted twice and indicated by use of the proword WORDS TWICE. Reception may be verified by use of the proword READ BACK.

Example A:

E969 transmits:

Alfa One Nine Two – Alfa One Nine Two – THIS IS – Echo Nine Six Nine – Echo Nine Six Nine – PRIORITY PRIORITY – OVER

A192 transmits:

Echo Nine Six Nine – Echo Nine Six Nine – THIS IS Alfa One Nine Two – Alfa One Nine Two – SEND YOUR PRIORITY – OVER

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E969 transmits:

Alfa One Nine Two – Alfa One Nine Two – THIS IS – Echo Nine Six Nine – Echo Nine Six Nine – WORDS TWICE – WORDS TWICE – PRIORITY – PRIORITY – Convoy has arrived – Convoy has arrived – TIME One Six Three Zero Zulu – TIME One Six Three Zero Zulu – OVER

A192 transmits:

Echo Nine Six Nine – Echo Nine Six Nine – THIS IS Alfa One Nine Two – Alfa One Nine Two – SAY AGAIN – SAY AGAIN – WORD BEFORE has – WORD BEFORE has – OVER

E969 transmits:

Alfa One Nine Two – Alfa One Nine Two – THIS IS Echo Nine Six Nine – Echo Nine Six Nine – I SAY AGAIN – I SAY AGAIN – WORD BEFORE has – WORD BEFORE has – Convoy – Convoy – OVER

A192 transmits:

Echo Nine Six Nine – Echo Nine Six Nine – THIS IS – Alfa One Nine Two – Alfa One Nine Two – ROGER – ROGER – OUT

Example B:

The text consists of code groups.

E969 transmits:

Alfa One Nine Two – Alfa One Nine Two – THIS IS Echo Nine Six Nine – Echo Nine Six Nine – WORDS TWICE – WORDS TWICE – PRIORITY – PRIORITY – TIME One Two Zero Nine Zero Three Zulu – TIME One Two Zero Nine Zero Three Zulu – GROUPS EIGHT – GROUPS EIGHT – Alfa Mike Lima Quebec Delta – Alfa Mike Lima Quebec Delta – Romeo Oscar Charlie Zulu Yankee – Romeo Oscar Charlie Zulu Yankee, etc. – OVER

A192 transmits:

Echo Nine Six Nine – Echo Nine Six Nine – THIS IS Alfa One Nine Two
– Alfa One Nine Two – ROGER – ROGER – OUT

614. RELAY

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

Example:

Z34D transmits:

Nine Two – THIS IS Four Delta – RELAY – PRIORITY – TIME One
One One Three Two Two Zulu – FROM Four Delta – TO Nine Five –
Proceed on mission assigned – OVER

A192 transmits:

THIS IS Nine Two - ROGER – OUT

A192 relays the message:

Nine Five – THIS IS Nine Two – PRIORITY – TIME One One One Three
Two Two Zulu – FROM Four Delta – TO Nine Five – Proceed on mission
assigned – OVER

H795 transmits:

THIS IS Nine Five – ROGER – OUT

- b. The proword RELAY TO followed by an address designator indicates that the station called is to relay the message to the stations indicated. When more than one station is called, the call sign of the station designated to perform the relay will precede the proword RELAY TO.

Example A:

Z34D transmits:

Nine Two – THIS IS – Four Delta – RELAY TO Nine Five – PRIORITY
– TIME One One One Three Two Two Zulu – Proceed on mission
assigned – OVER

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A192 transmits:

THIS IS Nine Two – Roger – OUT

A192 relays the message:

Nine Five – THIS IS – Nine Two – FROM Four Delta – PRIORITY –
TIME One One One Three Two Two Zulu – Proceed on mission assigned
– OVER

H795 transmits:

THIS IS – Nine Five – ROGER – OUT

Example B:

C206 transmits:

Eight One – Seven Eight – THIS IS Zero Six – Eight One – RELAY TO
Bravo Four Two Zero – ROUTINE –TIME Two One Zero Eight One Four
Zulu – FROM Charlie Two Zero Six – TO Bravo Four Two Zero – INFO
Delta Three Eight One – Foxtrot One Seven Eight – BREAK – Text –
OVER

D381 transmits:

THIS IS Eight One – ROGER – OUT

F178 transmits:

THIS IS Seven Eight – ROGER – OUT

D381 relays the message to B420

Note: In this case, D381 has relayed the message to B420, who is an off-net station, using radiotelephone procedure. At times, it is necessary to relay a message originated on a radiotelephone circuit by some other means of communications. When such relay is necessary, it is the responsibility of the station relaying the message to use the proper format for the means of communications employed for relay.

- c. The proword RELAY THROUGH allows the NCS or another station to indicate a station that can relay a message.

Example:

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F178 attempts to transmit a message to E969 but cannot contact him. The NCS directs F178 to relay through A192 who he knows to be in contact with E969:

Seven Eight – THIS IS – Four Delta – RELAY THROUGH Nine Two – OUT

F178 transmits:

Nine Two – THIS IS – Seven Eight – RELAY TO Six Nine – Move now – OVER, etc.

- d. The proword THROUGH ME allows a third station who knows that he is in contact with the required station to indicate that he is able to relay the message:

Example:

In the previous example, if the NCS had known that he was in contact with E969 he could have transmitted:

Seven Eight – THIS IS – Four Delta – THROUGH ME – OVER

- e. In all cases, whether the originating station can or cannot hear the relaying station, the relaying station must inform the originating station (station from whom the message was received for relay) that he has not been able to relay the message.

Example:

C206 requests D381 to relay a message to B420. D381 accepts but is unable to relay. D381 informs C206 and transmits Zero Six THIS IS Eight One UNABLE TO RELAY YOUR MESSAGE (DTG OR TEXT) TO Two Zero. C206 replies, Eight One THIS IS Zero Six ROGER OUT upon being informed that the message has not been passed and acknowledging the responsibility for clearing the message rests with C206.

Zero Six – THIS IS – Eight One – NOTHING HEARD from Two Zero – OVER

C206 replies:

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THIS IS Zero Six – ROGER – OUT, or as appropriate.

615. REPETITIONS

- a. When words are missed or are doubtful, repetitions are to be requested by stations before receiving for the message. The proword SAY AGAIN, used alone or in conjunction with ALL BEFORE, ALL AFTER, FROM, TO, WORD BEFORE, WORD AFTER, will be used for this purpose. In complying with requests for repetitions, the transmitting station will identify that portion which is being repeated.

Example A:

Z34D calls the two stations for which he has traffic:

Zero Six – Eight One – THIS IS Four Delta MESSAGE – ROUTINE – TIME Zero Eight One Zero Five Two Zulu – FROM Four Delta – TO Zero Six – INFO Eight One _ BREAK – At One Eight Zero Zero Zulu – Proceed Hong Kong – To Arrive One Six May – Load One Thousand Troops – for return Ningpo – I SPELL – November India November Golf Papa Oscar – Ningpo – ACKNOWLEDGE – OVER

C206, having missed from “At” to “Proceed,” transmits:

THIS IS Zero Six – SAY AGAIN – FROM At TO Proceed – OVER

Z34D deals with the request for repetitions by C206 before the other station requests his repetitions:

THIS IS Four Delta – I SAY AGAIN – FROM At TO Proceed – At Eight Zero Zero Zulu Proceed – OVER

C206, having now received the message satisfactorily, transmits:

THIS IS Zero Six – ROGER – OUT

Having heard C206 give a receipt for the message, the next station asks for his repetitions. In this case, D381 missed from “At” to “Proceed” and the word after “Load.” As C206 had already asked for the phrase from “At” to “Proceed” and D381 heard it repeated. It is not now necessary for him to request that part to be repeated. D381 asks, therefore, for the word after “Load” to be repeated:

THIS IS Eight One – SAY AGAIN – WORD AFTER Load – OVER

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Z34D repeats the word:

THIS IS Four Delta – I SAY AGAIN – WORD AFTER Load – One – Over

D381, having now received the message satisfactorily, transmits:

THIS IS Eight One – ROGER – OUT

Example B:

Alternatively, the second station in the sequence of answering, not having heard the transmitting station answer the request for repetition within 5 seconds, transmits:

THIS IS Eight One – SAY AGAIN – WORD AFTER Load – OVER

Z34D having received a response from all stations concerned, transmits:

THIS IS Four Delta – I SAY AGAIN – At TO Proceed – At One Eight Zero Zero Zulu – Proceed – WORD AFTER Load – One – OVER

C206 transmits:

THIS IS Zero Six – ROGER – OUT

D381 transmits:

THIS IS Eight One – ROGER – OUT

- b. In requesting repetitions of the heading of a message, a repetition may be requested of all that portion of the heading preceding or following a proword, or that portion of the heading between any two prowords. Requests for repetitions and replies thereto must include the nearest proword preceding and/or following the portion requested.

Example A:

E969 transmits:

Zero Six – Seven Eight – THIS IS Six Nine – PRIORITY – TIME One Eight One Six Two Five Zulu – FROM Six Nine – TO Zero Six – Seven

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Eight – INFO Bravo Four Two Zero – BREAK – Proceed to rejoin convoy
– OVER

C206, having missed all before the address, transmits:

THIS IS Zero Six – SAY AGAIN – ALL BEFORE FROM – OVER

E969 replies to C206:

Zero Six – THIS IS Six Nine – I SAY AGAIN – ALL BEFORE FROM –
Zero Six – Seven Eight – THIS IS Six Nine – PRIORITY – TIME One
Eight One Six Two Five Zulu – OVER

C206 transmits:

THIS IS Zero Six – ROGER – OUT

F178, having received the message satisfactorily, transmits:

THIS IS Seven Eight – ROGER – OUT

Example B:

D381 transmits:

Nine Five – THIS IS Eight One – ROUTINE – TIME Two Four Zero
Nine One Two Zulu – FROM Eight One – TO Nine Five – INFO – Bravo
Four Two Zero – BREAK – Cancel my Two Three One Four Two Eight
Zulu – OVER

H795, having missed the portion between the date-time group and the
information addressees, transmits:

THIS IS Nine Five – SAY AGAIN – FROM TIME TO INFO – OVER

D381 transmits:

THIS IS Eight One – I SAY AGAIN – FROM TIME TO INFO – TIME
Two Four Zero Nine One Two Zulu – FROM Eight One – TO Nine Five –
INFO – OVER

H795 transmits:

THIS IS Nine Five – ROGER – OUT

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- c. When it is necessary to ask for repetitions after a message has been received, such requests and replies there to must identify the message being queried as well as the portion required. Where used, the date-time group or time group shall be used for such identification.

Example:

Eight One THIS IS Nine Five – SAY AGAIN your Two Four Zero Nine One Two Zulu – OVER

Nine Five THIS IS Eight One – I SAY AGAIN – Nine Five – THIS IS Eight One – ROUTINE – TIME Two Four Zero Nine One Two Zulu – FROM Eight One – TO Nine Five – INFO – Bravo Four Two Zero – BREAK – Cancel my Two Three One Four Two Eight Zulu – OVER

THIS IS Nine Five – ROGER – OUT

616. CHECKING THE GROUP COUNT

- a. When a message consisting of coded groups is being received and the number of groups actually received does not correspond with the group count of the message, the receiving station requests a check by transmitting the phrase “Interrogative GROUPS...,” stating the number of groups actually received.
- b. When queried, the transmitting station will check and, if the number of groups received is correct, will indicate this by use of the proword CORRECT. The receiving station must then alter the group count accordingly.
- c. In all messages where words and groups are counted and the count is 50 or less, the transmitting station, if it considers the receiving station to be incorrect after it has questioned the group count, repeats the group count followed by the initial letter of each group. This will enable the receiving station to determine which groups are missing and to request a repetition.

Example A (Group Count Correct – Less Than 50 Groups):

D381 transmits:

Nine Two – THIS IS Eight One – ROUTINE – TIME One Four Two Zero Three Eight Zulu – GROUPS One Two – Delta Golf India – Lima Oscar

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Papa – Juliett Tango Xray – Romeo Oscar Tango – Foxtrot Mike Xray – Oscar Papa India – Tango Romeo Sierra – Mike Delta Golf – Delta November India – Sierra Tango Delta – Golf Bravo Xray – Oscar Mike Bravo – OVER

A192, having received only 11 groups, transmits:

THIS IS Nine Two Interrogative GROUPS One One – OVER

D381 checks his group count against his transmission copy, finds it correct, and transmits:

THIS IS Eight One – GROUPS One Two – Delta Lima Juliett Romeo Foxtrot Oscar Tango Mike Delta Sierra Golf Oscar – OVER

D192 can now see which group he has missed and transmits:

THIS IS Nine Two – SAY AGAIN Five – OVER

D381 transmits:

THIS IS Eight One – I SAY AGAIN Five – Foxtrot Mike Xray – OVER

D192 transmits:

THIS IS Nine Two ROGER – OUT

Example B (Group Count Incorrect):

C206 transmits:

Seven Eight – THIS IS Zero Six – ROUTINE – TIME Zero Four One Two Five Two Zulu – GROUPS Eight – Mike Tango November – Sierra Uniform Bravo – Echo Lima Yankee – Golf Bravo Zulu – Foxtrot Oscar Uniform – Delta Oscar Papa – Oscar Bravo Juliett – OVER

F178, noticing that the group count and the number of groups he has received are at variance, transmits:

THIS IS Seven Eight – Interrogative GROUPS Seven – OVER

C206 checks his group count against the transmission copy, discovers his error, and transmits:

THIS IS Zero Six – CORRECT – OVER

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F178 transmits:

THIS IS Seven Eight – ROGER – OUT

- d. In all messages with a group count exceeding 50 groups, if the receiving station is considered to be incorrect the transmitting station repeats the original group count and transmits the identity of the first, eleventh, and every subsequent tenth group followed by the letter of that group.

Example (Group Count Correct – More Than 50 Groups):

D381 transmits a message containing 65 groups to A192.

A192 queries the group count:

Eight One THIS IS Nine Two – Interrogative GROUPS Six Five – OVER

D381 checks and finds the group count correct as sent. He then transmits:

THIS IS Eight One – GROUPS Six Five – One Mike – One One Sierra –
Two One Papa – Three One Romeo – Four One India – Five One
November – Six One Golf – OVER

A192 then request a repetition of the 10 groups in which he has a
miscount:

THIS IS Nine Two – SAY AGAIN – One One TO Two Zero – OVER

D381 then transmits the requested groups.

617. CORRECTIONS

- a. When a transmitting operator makes an error, the proword CORRECTION will be transmitted followed by the last word, group, proword, or phrase correctly transmitted. Transmission then continues.

Example A:

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F178 transmits:

Nine Five – THIS IS Seven Eight – Convoy Romeo Three –
CORRECTION – Romeo Four should arrive – One Six Three Zero Lima –
TIME One Zero One Two Zulu – OVER

H795 transmits:

THIS IS Nine Five – ROGER – OUT

Example B:

C206 transmits:

Four Delta – THIS IS Zero Six – TIME Two Four Zero Seven One Two
Zulu – GROUPS Nine – Zulu Bravo Alfa Xray – Xray Oscar –
CORRECTION – Zulu Bravo Alfa Xray – Xray Quebec Alfa – Kilo, etc.

Z34D transmits:

THIS IS Four Delta – ROGER – OUT

Example C:

C206 transmits:

Seven Eight – THIS IS Zero Six – ROUTINE – TIME One Four Zero Six
Four Two Zulu – FROM Zero Six – TO Four Eight – CORRECTION –
TO Seven Eight – INFO Bravo Four Two Zero – Join Me – OVER

F178 transmits:

THIS IS Seven Eight – ROGER – OUT

Example D:

D381 transmits:

Zero Six – THIS IS Eight One – PRIORITY – TIME Zero Three One
Eight One Four Zulu – Latitude One Six Three Zero – Longitude One
Zero One Five – CORRECTION – Longitude One Zero Five Five –
OVER

C206 transmits:

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THIS IS Zero Six – ROGER – OUT

- b. When an error in transmission is made but not discovered immediately, a correction may be made in the final instructions element provided that the ending sign has not been transmitted. When making such a correction, the word, group proword, or phrase must be properly identified.

Example:

Nine Five - THIS IS Eight One - Tanks Will Arrive - Grid Three Two One
Nine Five Three - at Hotel Hours Minus Six - time One Four Two Six
Zulu - CORRECTION - WORD AFTER Minus - Five - OVER

D95 transmits:

THIS IS Nine Five – ROGER – OUT

- c. If it is necessary to make corrections after a receipt has been obtained for a message, an abbreviated service message, identifying the message and the portion to be corrected, should be made:

Example:

F178 transmits:

Nine Five – THIS IS Seven Eight – CORRECTION – My One Three One Five One Six
Zulu – WORD AFTER Monday – Morning – OVER

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618. CANCELLING MESSAGES

- a. During the transmission of a message and up to the transmission of the ending proword OVER or OUT, the message may be cancelled by use of the proword DISREGARD THIS TRANSMISSION – OUT.

Example:

During the transmission of a message E969 realises that the transmission is being sent in error and therefore cancels it:

Seven Eight – THIS IS – Six Nine – ROUTINE – TIME One Zero Zero Six Zero Two Zulu – Begin unloading at One One One Two Three Zero Zulu – Proceed – DISREGARD THIS TRANSMISSION – OUT

- b. A message that has been completely transmitted can only be cancelled by another message.

Example:

E969 transmits:

Seven Eight – THIS IS – Six Nine – Cancel my One Zero Zero Six Zero Two Zulu – TIME Zero Seven One Two Zulu – OVER

619. DO NOT ANSWER TRANSMISSIONS

When it is imperative that the called stations do not answer a transmission, the proword DO NOT ANSWER will be transmitted immediately following the call, and the complete transmission will be sent twice, the full transmission ending with the proword OUT. DO NOT ANSWER transmissions must be authenticated.

Example:

Sabine Raider transmits:

Siphon – THIS IS – Raider – DO NOT ANSWER – Act in accordance with Plan Charlie – TIME Two Two One Eight Zulu – AUTHENTICATION IS..... – I SAY AGAIN – Siphon – THIS IS Raider – DO NOT ANSWER – Act in accordance with Plan Charlie – TIME Two Two One Eight Zulu – AUTHENTICATION IS..... - OUT

620. READ BACK

- a. If it is desired that a message or portion thereof be read back to ensure accuracy, the proword READ BACK and identifying data; e.g., READ BACK TIME, READ BACK GRID, READ BACK TEXT, etc., will be transmitted immediately following the call:

Example A:

Z34D transmits:

Seven Eight – THIS IS – Four Delta – READ BACK – Convoy has arrived – Time One Six Three Zero Zulu – OVER

E178 transmits:

THIS IS Seven Eight – I READ BACK – Seven Eight – THIS IS Four Delta – READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

Z34D transmits:

THIS IS Four Delta – CORRECT – OUT

Example B:

C206 transmits:

Eight One – THIS IS Zero Six – READ BACK GRID – Meet Me Grid One Three Four Two Six Five – OVER

D381 transmits:

THIS IS Eight One – I READ BACK GRID – One Three Four Two Six Five – OVER

C206 transmits:

THIS IS Zero Six – CORRECT – OUT

Note: When READ BACK procedure is employed, the proword ROGER is not necessary to indicate receipt of the message.

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- b. The proword READ BACK, when not preceded by identifying call signs, means that all stations are to read back. If a collective call is used, but only part of the stations represented in the call are required to read back, that station or those stations will be specified by transmitting the appropriate call signs preceding the proword READ BACK. When the order to read back is given, only those stations directed to do so will read back; remaining stations called will keep silent unless directed by the calling station to receipt.

Example:

Z34D transmits:

Three Charlie – THIS IS Four Delta – Eight One READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

D381 transmits:

THIS IS Eight One – I READ BACK – Three Charlie – THIS IS Four Delta – Eight One READ BACK – Convoy has arrived – TIME One Six Three Zero Zulu – OVER

C206 transmits:

THIS IS Zero Six – ROGER – OUT

- c. If the station reading back does so incorrectly, the originating station will call attention to the error by use of the proword WRONG followed by the correct version.

Example:

D381 read back:

THIS IS – Eight One – I READ BACK – Three Charlie – THIS IS – Four Delta – Eight One READ BACK – Convoy has arrived – TIME One Six Two Zero Zulu – OVER

Z34D transmits and directs C206 to receipt:

THIS IS Four Delta – CORRECT – Zero Six – OVER

C206 transmits:

THIS IS Zero Six – ROGER – OUT

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- d. If the station reading back does so incorrectly, the originating station will call attention to the error by use of the proword WRONG followed by the correct version:

Example:

D381 reads back:

THIS IS – Eight One – I READ BACK – Three Charlie – THIS IS – Four Delta – Eight One READ BACK – Convoy has arrived – TIME One Six Two Zero Zulu – OVER

Z34D transmits:

THIS IS – Four Delta – WRONG – TIME – One Six Three Zero Zulu – OVER

D381 transmits:

THIS IS – Eight One – TIME One Six Three Zero Zulu – OVER

Z34D transmits:

THIS IS – Four Delta – CORRECT – OUT

621. RECEIPT

- a. Receipt is employed in direct station-to-station traffic handling. No message is considered delivered until receipt is obtained (but see b below). A receipt may be effected as follows:
- (1) The receiving station transmits a receipt after each message or string of messages by the proword ROGER.
 - (2) Where abbreviated procedure is in force, a return transmission may be considered as a receipt if no confusion is likely to arise.
 - (3) In the case of a message requiring acknowledgment, the use of the proword WILCO constitutes a receipt (paragraph 622) as the meaning of WILCO includes that of ROGER.

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Example:

C206 transmits:

Six Nine – THIS IS – Zero Six – Send boat for mail – TIME One Seven
One Four Zulu – OVER

F969 transmits:

THIS IS – Six Nine – ROGER – OUT

- b. When the transmitting station considers speed of handling a primary consideration, one station in the net may be directed to receipt for the message and no other stations may answer until instructed to do so. This does not prohibit any station from requesting repetition. Security is enhanced if the same station is directed to receipt for all transmissions.

Example:

Station Z34D sends a message to the collective call Y13C and only desires a receipt from D381.

Z34D transmits:

Three Charlie – THIS IS Four Delta – Send boat for mail – TIME One
Two One Six Zulu – Eight One – OVER

D381 transmits:

THIS IS Eight One – ROGER – OUT

H795, having missed the word “mail,” transmits:

THIS IS Nine Five – SAY AGAIN – WORD AFTER for – OVER

Z34D transmits:

THIS IS Four Delta – I SAY AGAIN – WORD AFTER for – mail –
OVER

H795 transmits:

THIS IS Nine Five – ROGER – OUT

- c. Should either the transmitting or receiving station wish to indicate that he has further traffic to transmit to the station that he is working, this may be done by using the proword MORE TO FOLLOW in the message ending or receipt.

Example A:

C206, in transmitting a message to E969 wishes to indicate that he has further traffic for E969, transmits:

Six Nine THIS IS Zero Six – TEXT – MORE TO FOLLOW – OVER

THIS IS Six Nine – ROGER – OVER

Example B:

Z34D, in transmitting a message to Y13C wishes to indicate that he has further traffic for C206 and H795, transmits:

Three Charlie – THIS IS Four Delta – TEXT – MORE TO FOLLOW for Zero Six and Nine Five – OVER

THIS IS Nine Two – ROGER – OUT

THIS IS Zero Six – ROGER – OVER

THIS IS Eight One – ROGER – OUT

THIS IS Six Nine – ROGER OUT

THIS IS Seven Eight – ROGER OUT

THIS IS Nine Five – ROGER – OVER

THIS IS Four Delta, etc.

Example C:

E969, in receipting for a message from C206 wishes to indicate that he has a message for C206, transmits:

THIS IS Six Nine – ROGER – MORE TO FOLLOW – OVER

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THIS IS Zero Six – OVER

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622. ACKNOWLEDGMENT OF MESSAGES

An acknowledgment should not be confused with a reply or receipt. A prompt reply referring to the message may serve in lieu of an acknowledgment. It is the prerogative of the originator to request an ACKNOWLEDGMENT to a message from any or all addressees of that message. If an acknowledgment is desired for a message, the request for acknowledgment normally is included in the text of that message. If the message has been transmitted, the request for acknowledgment will constitute a new message. Acknowledgments are originated only by the addressee to whom the request for acknowledgment was made. Procedure for acknowledgment of tactical signals is contained in paragraph 705.

Example:

Z34D transmits a message to D381 and desires an acknowledgment:

Eight One – THIS IS Four Delta – Search Area Delta –
ACKNOWLEDGE – TIME One One Two Zero Zulu – OVER

D381 transmits a receipt for the message:

THIS IS Eight One – ROGER – OUT

D381 operator, having shown the message to the commanding officer or his duly authorized representative and having been ordered to acknowledge the message, transmits:

Four Delta – THIS IS Eight One – Your One One Two Zero Zulu
Acknowledged – TIME One One Two Five Zulu – OVER

623. VERIFICATIONS

- a. When verification of a message or a portion thereof has been requested by an addressee, the originating station will verify with the originator and send the correct version.

Example:

H795 transmits:

Four Delta – THIS IS Nine Five – VERIFY Your One Zero Zero Eight
Zero One Zulu – ALL BEFORE BREAK – OVER

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Z34D transmits:

THIS IS – Four Delta – ROGER – OUT (or WAIT or WAIT OUT)

Z34D operator checks with the originator, establishes that the heading previously transmitted was correct, transmits:

Nine Five – THIS IS Four Delta – I VERIFY My One Zero Zero Eight Zero One Zulu – ALL BEFORE BREAK – Nine Five – THIS IS Four Delta – PRIORITY – TIME One Zero Zero Eight Zero One Zulu – FROM Four Delta TO Nine Five – INFO Zero Six – GROUPS One Seven – BREAK – OVER

H795 transmits:

THIS IS Nine Five – ROGER – OUT

- b. When a message to a number of addressees is queried by one station and found to be incorrect, the corrected version must be sent to all addressees.

Example:

D381 transmits:

Seven Eight – THIS IS Eight One – VERIFY Your Zero Eight Four Five Zulu – WORD AFTER Proceed – Haiphong – OVER

F178 transmits:

THIS IS Seven Eight – ROGER – OUT (or WAIT or WAIT OUT)

F178 operator checks the message with the originator and finds that the word after “proceed” should have been “Hong Kong” instead of “Haiphong.” He therefore transmits a correction to all the original addressees.

Eight One – Six Nine – THIS IS Seven Eight – CORRECTION – My Zero Eight Four Five Zulu – WORD AFTER Proceed – Hong Kong – OVER

D381 transmits:

THIS IS Six Nine – ROGER OUT

624. BREAK-IN PROCEDURE

- a. A station having a message of higher precedence than the transmission in progress may break in and thus suspend that transmission in the following circumstances:
 - (1) FLASH – Break in at once and transmit the message (b and c below).
 - (2) IMMEDIATE – May break in at once and pass the message. A preliminary call may be made before transmitting the message, if necessary. On a directed net, approval to transmit the message must be obtained.
 - (3) PRIORITY – As for IMMEDIATE except that only long ROUTINE messages should be interrupted.

Note: Break-in procedure will not normally be employed during the transmission of tactical messages except to report enemy contact.

- b. The precedence spoken three times means, “Cease transmissions immediately. Silence will be maintained until the station breaking in has passed the message.”
- c. Break-in procedure for messages of precedence FLASH on either a free net or a directed net should take the following form:

Example:

D381 is transmitting an IMMEDIATE message to Z34D when E969 is handed a FLASH message for transmission to A192. When D381 pauses, E969 transmits:

FLASH FLASH FLASH – Nine Two – THIS IS – Six Nine FLASH –
Text – OVER

A192 transmits:

THIS IS Nine Two – ROGER – OUT

D381 then continues with his transmission:

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Four Delta – THIS IS – Eight One – ALL AFTER – etc.

- d. Break-in procedure for messages of IMMEDIATE or PRIORITY precedence is illustrated in the following examples:

(1) On Directed Nets:

Example:

D381 is transmitting a PRIORITY message to Z34D when E969 is handed an IMMEDIATE message for A192. When D381 pauses, E969 transmits:

IMMEDIATE IMMEDIATE IMMEDIATE – Four Delta – THIS IS – Six Nine – IMMEDIATE for Nine Two – OVER (D381, hearing E969's break-in, ceases transmission.)

NCS transmits:

THIS IS – Four Delta – Send your IMMEDIATE – OVER

On hearing this authorisation, A192 transmits:

Six Nine -THIS IS – Nine Two – OVER

E969 transmits:

Nine Two – THIS IS Six Nine – IMMEDIATE – Text – OVER

A192 transmits:

THIS IS – Nine Two ROGER – OUT

As soon as the IMMEDIATE message has been receipted, D381 continues his transmission:

Four Delta – THIS IS – Eight One – ALL AFTER – etc.

(2) On Free Nets:

Example A:

A192 is transmitting a PRIORITY message to D381 when Z34D is handed an IMMEDIATE message for E969. When A192 pauses, Z34D transmits:

IMMEDIATE IMMEDIATE IMMEDIATE –

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A192 hearing the precedence spoken three times, ceases transmission and Z34D continues:

Six Nine – THIS IS – Four Delta – IMMEDIATE – Text – OVER

E969 transmits:

THIS IS Six Nine – ROGER – OUT

A192 then continues transmission:

Eight One – THIS IS – Nine Two – ALL AFTER – etc.

Example B:

A192 is transmitting a long ROUTINE message to D381 when Z34D is hand a PRIORITY message for E969. When A192 pauses, Z34D transmits:

PRIORITY PRIORITY PRIORITY –

A192, hearing the precedence spoken three times, ceases transmission and Z34D continues:

Six Nine – THIS IS Four Delta – PRIORITY – Text – OVER

E969 transmits:

THIS IS – Six Nine - ROGER – OUT

A192 then continues his transmission:

Eight One – THIS IS – Nine Two – ALL AFTER – etc.

625. ELECTRONIC, RADIO AND EMERGENCY SILENCE

a. Electronic Silence:

- (1) Orders for the imposition of electronic silence will be issued in advance by secure means, and no executive order in connection

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with the imposition of electronic silence is to be passed in the clear, or by codeword, over radio.

- (2) The orders which impose electronic silence will also detail THE CIRCUMSTANCES IN WHICH, AND BY WHOM, IT MAY BE LIFTED OR BROKEN AS WELL AS THE PROCEDURE FOR LIFTING OR BREAKING. This will normally include the use of codewords and/or transmission authentication.
 - (3) All stations must be on their guard against attempts by the enemy to induce a break of electronic silence by false messages. On no account is silence to be broken to request authentication of a station which transmits during electronic silence if that station has not given the proper codeword or self-authentication for lifting silence or an emergency break.
- b. Radio Silence:
- (1) Radio silence may be imposed or lifted by the control station on the net, or nets, for which it is responsible.
 - (2) Radio silence may be predetermined or may occur in an emergency. When predetermined, instructions for imposing, lifting, or breaking radio silence are to be passed by any secure means available. Emergency silence is described in sub para c. below.
 - (3) Radio silence is to be imposed in accordance with the instructions given. This will normally be by the use of codewords, nicknames, or other predetermined designator. Lifting or breaking radio silence may be achieved in the same way, or by the use of transmission or self-authentication.

Example A, imposing radio silence by use of a nickname:

The NCS transmits to all subordinate stations:

Three Charlie – THIS IS – Four Delta – PAPER DOLL – OVER

Each subordinate station answers in turn:

THIS IS – Nine Two – ROGER – OVER

THIS IS – Zero Six – ROGER – OVER – etc.

The NCS transmits:

THIS IS – Four Delta – PAPER DOLL now – OUT

Note: This procedure cannot be distinguished from the procedure for closing down and changing frequency when using nicknames.

Example B, breaking radio silence by means of transmission authentication:

A192 has authority and reason, within the conditions ordered, to break radio silence. He transmits:

Four Delta – THIS IS – Nine Two – Sighting Report – TIME.....-
AUTHENTICATION IS..... – OVER

Z34D transmits:

THIS IS – Four Delta – ROGER – OUT

Note: The remainder of the net maintains radio silence; a break by one station does not lift silence.

Example C, lifting radio silence by means of transmission authentication:

The NCS transmits:

Three Charlie – THIS IS – Four Delta – SILENCE LIFTED –
TIME..... - AUTHENTICATION IS – OUT

c. Emergency Silence:

- (1) Emergency (radio) silence may be imposed or lifted only by competent authority.
- (2) When a transmission authentication system is in force, a station must always authenticate a transmission which imposes or lifts emergency silence, or which calls stations during periods of emergency silence.
- (3) Transmissions imposing emergency silence will be made twice through and ended with the proword OUT. Stations do not answer or receipt such transmissions.

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- (4) The proword SILENCE spoken three or more times means "Cease transmissions on this net immediately. Silence will be maintained until lifted"
- (5) After a call, use of the proword SILENCE spoken three or more times means "Stations addressed are to cease all transmissions on this net immediately."

Example:

To impose emergency silence on the net, the NCS transmits:

Three Charlie – THIS IS – Four Delta – SILENCE SILENCE SILENCE –
 TIME – AUTHENTICATION IS – I SAY AGAIN –
 Three Charlie – THIS IS – Four Delta – SILENCE SILENCE SILENCE –
 TIME – AUTHENTICATION IS OUT.

- (6) SILENCE spoken three or more times followed by a frequency or frequency designator means "Cease all transmissions immediately on frequency (or frequency indicated by the designator)."
- (7) SILENCE spoken three or more times followed by "all nets" means "Cease all transmissions immediately on all nets."

Example A:

To impose emergency silence on all stations on the frequency indicated by the designator C74, the NCS transmits:

Three Charlie – THIS IS – Four Delta – SILENCE SILENCE SILENCE –
 Charlie Seven Four – TIME - AUTHENTICATION IS –
 I SAY AGAIN – Three Charlie – THIS IS Four Delta – SILENCE
 SILENCE SILENCE – Charlie Seven Four – TIME –
 AUTHENTICATION ISOUT

Example B:

To impose emergency silence on all stations on 134.25MHz only, the NCS transmits:

Three Charlie – THIS IS Four Delta – SILENCE SILENCE SILENCE –
 One Three Four Decimal Two Five – TIME – AUTHENTICATION
 IS – I SAY AGAIN Three Charlie – THIS IS Four Delta –

SILENCE SILENCE SILENCE – One Three Four Decimal Two Five –
TIME – AUTHENTICATION IS OUT

Example C:

To impose emergency silence on all nets including subordinate nets, using the codeword BODYGUARD, the NCS transmits:

Three Charlie – THIS IS – Four Delta – SILENCE SILENCE SILENCE –
All nets – BODYGUARD – I SAY AGAIN - Three Charlie – THIS IS –
Four Delta – SILENCE SILENCE SILENCE – All nets – BODYGUARD
– OUT

Note: Subordinate NCS must repeat this message on their own nets using a different codeword or transmission authentication.

- (8) Emergency silence is lifted by the use of the proword SILENCE LIFTED, qualified where necessary by a frequency, a frequency designator, or the phrase “all nets” and followed by transmission authentication or a codeword, etc.

Example A:

Lifting emergency silence for all stations on a net, the NCS transmits:

Three Charlie – THIS IS – Four Delta – SILENCE LIFTED – TIME
..... - AUTHENTICATION IS – OUT

Example B:

Lifting emergency silence for all stations on a frequency indicated by the designator C74, using the codeword TOWER, the NCS transmits:

Three Charlie – THIS IS – Four Delta – SILENCE LIFTED – Charlie
Seven Four – TOWER – OUT

- d. Following a period of electronic or radio silence, the NCS needs to consider the requirement to re-establish communications by means of a radio check.

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626. CLOSING DOWN

- a. No station is to close down without prior permission from the NCS. The greatest care must be taken by control stations never to close down a net, or an individual subordinate station, without being completely satisfied that the stations know, or will know, the new frequency and time of reopening. The necessary orders are always passed by the most secure means and, wherever possible, not by radio.
- b. When it is essential to order a close-down over radio, and the NCS is satisfied regarding the arrangements for reopening, he orders the net or subordinate station to close down. He may do this by means of the proword CLOSE DOWN or by nickname.

Example A:

Z34D orders the close-down of the net using the nickname BLIND SPOT:

Three Charlie – THIS IS – Four Delta – BLIND SPOT – OVER

The subordinate stations reply in turn:

THIS IS – Nine Two – ROGER – OVER

THIS IS – Zero Six – ROGER – OVER, etc.

Z34D transmits:

THIS IS – Four Delta – BLIND SPOT now – OUT

Example B:

Z34D orders the close down of the net using the proword CLOSE DOWN:

Three Charlie – THIS IS – Four Delta – CLOSE DOWN – OVER

The subordinate stations reply in turn:

THIS IS Nine Two ROGER – OVER

THIS IS Zero Six – ROGER – OVER – etc.

Z34D transmits:

THIS IS Four Delta – CLOSE DOWN now – OUT

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CHAPTER 7**EXECUTIVE METHOD****701. GENERAL**

- a. The Executive Method is used when it is desired to execute a tactical message at a given instant; that is, to ensure that two or more units take action at the same moment.
- b. The operating rules in Chapter 6 apply equally to the Executive Method; however, it is the purpose of this chapter to amplify the basic procedure.
- c. Abbreviated plaindress format is normally used for messages transmitted by the Executive Method.
- d. When communications are good, it is not necessary to have all stations called acknowledge receipt of tactical messages. In these circumstances, only those stations whose call signs precede the proword OVER receipt for the message.
- e. The term "signal" used in this chapter refers to a type of message, the text of which consists of one or more letter, words, or signal flags, the prearranged meanings of which are found in tactical publications.
- f. Messages sent by Executive Method are never to have a time group included in the message ending.

702. EXECUTIVE METHODS

There are two Executive Methods:

- a. Delayed Executive Method.
- b. Immediate Executive Method.

703. DELAYED EXECUTIVE METHOD

A tactical message sent by the Delayed Executive Method will carry the warning proword EXECUTE TO FOLLOW in the message instruction, immediately preceding the text. The executive signal will be sent later in the form STANDBY – EXECUTE, the

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latter word being the instant of execution. The text of the message being executed shall be repeated prior to transmission of the proword EXECUTE when:

- a. It is a portion of, or one of, several outstanding EXECUTE TO FOLLOW messages.
- b. A considerable time has elapsed between the transmission of an EXECUTE TO FOLLOW message and the transmission of the executive signal.

Example A:

Z34D transmits:

Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – One Eight Five Corpen – OVER

All stations respond in alphabetical order of full call signs:

Nine Two – ROGER – OUT

Zero Six – ROGER – OUT

Eight One – ROGER – OUT

Six Nine – ROGER – OUT

Seven Eight – ROGER – OUT

Nine Five – ROGER – OUT

When ready to execute, Z34D transmits:

Three Charlie – THIS IS – Four Delta – Standby – EXECUTE – BREAK – Eight One – OVER

D381 transmits:

Eight One – ROGER – OUT

Example B:

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To execute a portion of an outstanding Delayed Executive Method signal, Z34D transmits:

Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – Formation One Two – Tack Speed Two Five – BREAK – Zero Six – Nine Five – OVER

C206 and H795 transmit:

Zero Six – ROGER – OUT

Nine Five – ROGER – OUT

When ready to execute Formation One Two, Z34D transmits:

Three Charlie – THIS IS – Four Delta – Formation One Two – Standby – EXECUTE – Nine Two, Seven Eight – OVER

A192 and F178 transmit:

Nine Two – ROGER – OUT

Seven Eight – ROGER – out

When ready to execute the remaining portion, Z34D transmits:

Three Charlie – THIS IS – Four Delta – Standby – EXECUTE – Zero Six – Nine Five – OVER

C206 and H795 transmit:

Zero Six – ROGER – OUT

Nine Five – ROGER – OUT

Example C:

To execute a Delayed Executive Method signal, Z34D transmits:

Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – Formation One One – BREAK Eight One – Seven Eight – OVER

D381 and F178 transmit:

Eight One – ROGER – OUT

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Seven Eight – ROGER – OUT

Later, after a pause of several minutes, Z34D wishes to execute the signal and transmits:

Three Charlie – THIS IS – Four Delta – Formation One One – Standby – EXECUTE – Six Nine – Nine Five – OVER

E969 and H795 transmit:

Six Nine – ROGER – OUT

Nine Five – ROGER – OUT

704. IMMEDIATE EXECUTIVE METHOD

In cases of urgency, the executive signal may be transmitted in the final instructions element of the message to which it refers. To differentiate between this method and that laid down in paragraph 703, the transmission of the executive signal in the final instructions of the message to be executed is termed the “Immediate Executive Method.” It should be noted that:

- a. The use of the Immediate Executive Method does not allow stations to obtain verifications, repetitions, acknowledgments or cancellations before the message is executed.
- b. Messages made by the Immediate Executive Method should be in plain language, or should be limited to basic TURN, CORPEN, and SPEED signals.
- c. When using the Immediate Executive Method, the warning IMMEDIATE EXECUTE is used in the message instructions instead of the proword EXECUTE TO FOLLOW.
- d. The text of the signal is transmitted twice, separated by the proword I SAY AGAIN. The executive signal is transmitted in the final instructions.

Example:

Z34D transmits:

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Three Charlie – THIS IS – Four Delta – IMMEDIATE EXECUTE –
BREAK – Turn Nine – Tack – Speed One Eight – I SAY AGAIN – Turn
Nine – Tack – Speed One Eight – Standby – EXECUTE – Zero Six –
Seven Eight – OVER

C206 and F178 transmit:

Zero Six – ROGER – OUT

Seven Eight – ROGER – OUT

705. ACKNOWLEDGEMENT OF SIGNALS

Signals, the purport of which required the accomplishment of a difficult manoeuvre, quite often require acknowledgment of not only the understanding of the signal but also the capabilities of the addressee to perform such a manoeuvre. In such cases, the originator adds the word “acknowledge” as the last word in the text. When the commanding officer or authorised representative is close to the operator, and no delay in answering will result, the proword WILCO will be used in receipting in lieu of the proword ROGER. However, when this situation does not exist, the operator shall receipt in the usual manner and send the proword WILCO later, when ordered.

Example:

Z34D transmits:

Nine Two – Nine Five – THIS IS – Four Delta – EXECUTE TO
FOLLOW – Uniform Golf Two – Tack One Five – Tack – Zero Zero Zero
– Tack – One Two – ACKNOWLEDGE – BREAK – OVER

The commanding officer of A192 is not in close proximity, or desires to consider the message before acknowledging.

A192 transmits:

THIS IS – Nine Two – ROGER – OUT

The commanding officer of H795 is in close proximity and directs his operator to acknowledge.

H795 transmits:

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THIS IS – Nine Five – WILCO – OUT

When ready to acknowledge, A192 transmits:

Four Delta – THIS IS – Nine Two – WILCO – (your last transmission) –
OUT

Or

Four Delta – Nine Five – THIS IS – Four Delta – Standby – EXECUTE –
Nine Two – OVER

A192 transmits:

THIS IS – Nine Two – ROGER – OUT

706. VERIFICATIONS AND REPETITIONS

Verifications and repetitions of tactical messages are made in accordance with paragraphs 615 and 623 except that verifications or repetitions of signals taken from a naval signal book must be for the entire transmission or for those portions separated by the “Tack.” (The word VERIFY may be used before receipt when the addressee is operating the circuit or is close to the operator.)

Example A, verification:

Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – Zulu
Zulu One – Tack – Quebec Xray One – BREAK – Eight One – Nine Five
– OVER

D381 transmits:

THIS IS – Eight One – ROGER – OUT

H795 desires a verification of the first portion of the signal:

THIS IS Nine Five – VERIFY – FOLLOW TO – Tack – OVER

Z34D transmits:

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THIS IS – Four Delta – ROGER – OUT or WAIT OUT

After verifying the signal with the originating officer, and finding the original version is correct, Z34D transmits:

Nine Five – THIS IS – Four Delta – I VERIFY – FOLLOW TO Tack – FOLLOW - Zulu Zulu One – Tack – OVER

H795 transmits:

THIS IS – Nine Five – ROGER – OUT

(This leaves the original signal with only “Quebec Xray One” awaiting execution.)

Z34D then transmits a new signal:

Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – Zulu Zulu Seven – OVER

All stations receipt in the normal manner.

Z34D may now execute both outstanding EXECUTE TO FOLLOW signals with on EXECUTE:

Three Charlie – THIS IS – Four Delta – Standby – EXECUTE – Nine Five – OVER

H795 transmits:

THIS IS – Nine Five – ROGER – OUT

Example B, request for repetition:

Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – Zulu Zulu One – Tack – Quebec Xray One – BREAK – Eight One – Nine Five – OVER

D381 transmits:

THIS IS – Eight One – ROGER – OUT

H795 desires a repetition of the signal:

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THIS IS Nine Five – SAY AGAIN – OVER

Z34D transmits:

THIS IS – Four Delta – I SAY AGAIN - Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – Zulu Zulu One – Tack – Quebec Xray One – BREAK – Nine Five – OVER

THIS IS – Nine Five – ROGER – OUT

Example C, repetition of the call when unknown:

UNKNOWN STATION – THIS IS – Nine Five - SAY AGAIN – ALL BEFORE – EXECUTE TO FOLLOW – OVER

Nine Five – THIS IS Four Delta – I SAY AGAIN – Three Charlie – THIS IS – Four Delta – EXECUTE TO FOLLOW – OVER

THIS IS – Nine Five – ROGER – OUT

Example D, repetitions of the whole or any portion of the text:

Three Charlie - THIS IS – Four Delta – EXECUTE TO FOLLOW – Turn Starboard Nine Tack Tango Alfa One Two Tack One Tack Five – Nine Two – OVER

THIS IS – Nine Two – ROGER – OUT
Four Delta – THIS IS – Six Nine – SAY AGAIN – Starboard to Alfa – OVER

THIS IS – Four Delta – I SAY AGAIN – Starboard to Alfa – Starboard Nine Tack Tango Alfa – OVER

THIS IS – Six Nine – ROGER - OUT

707. EXECUTION OF NON-EXECUTIVE METHOD MESSAGES

Tactical messages taken from a signal book which do not employ Delayed Executive Method or Immediate Executive Method should have a time group included in the message ending. The use of a time group on a tactical message ordering action indicates that action is to be taken on receipt unless otherwise indicated in the text of the message.

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Example A (Action to be Taken on Receipt):

Z34D transmits:

Seven Eight – THIS IS – Four Delta – Station Bravo Three – TIME One
Six Four Two Zulu – OVER

F178 transmits:

THIS IS Seven Eight – ROGER – OUT

Example B (Action to be Taken at Time Indicated):

Z34D transmits:

Six Nine – THIS IS Four Delta – Yankee Mike Four – Tack – Tango One
Eight Answer – BREAK – TIME One Seven One Four Zulu – OVER

E969 transmits:

THIS IS Six Nine – ROGER – OUT

708. CANCELLING TACTICAL MESSAGES

- a. Tactical messages requiring cancellation shall be cancelled by the use of the proword NEGAT. Such messages can be cancelled individually or as a group.

Example A:

To cancel all signals transmitted to the same call and awaiting execution:

Three Charlie – THIS IS – Four Delta – NEGAT – TIME One Eight Three
One Zulu - OVER

Example B:

To cancel one of several signals awaiting execution:

Three Charlie – THIS IS – Four Delta – NEGAT – Turn Nine Tack –
Speed One Four – TIME One Eight One Five Zulu – OVER

Example C:

To cancel a portion of a signal awaiting execution:

Three Charlie – THIS IS – Four Delta – NEGAT – Speed One Four –
TIME One Eight One Five Zulu – OVER

- b. When a message is awaiting execution and a portion of it has been cancelled or executed, only the remainder of the message is considered to be outstanding.
- c. Messages sent by the Executive Method cannot be cancelled once the Executive signal EXECUTE has been transmitted.

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CHAPTER 8**MISCELLANEOUS PROCEDURES****801. METHOD OF SYNCHRONIZING TIME**

- a. If an accurate time check is desired, it will be requested by using the phrase "Request time check." The time at which the check is required may be indicated by the addition of a four-figure group. Time checks will be given in Greenwich mean time (GMT) unless otherwise requested or directed.

Example:

C206 requires to check his clock and transmits:

Four Delta – THIS IS Zero Six – Request time check – OVER

Z34D transmits:

THIS IS Four Delta – Time Check One Eight Zero Two Zulu (pause) One Five Seconds – One Zero Seconds – Five Four Three Two One – TIME One Eight Zero Two Zulu – OVER

C206 transmits:

THIS IS Zero Six – ROGER – OUT

- b. Should the occasion arise when the NCS desires to give an accurate time check to all stations on the net, he will pause a sufficient period of time between his warning phrase and the commencement of his countdown to allow all receiving operators to prepare their watches. The NCS may announce his intention of transmitting a time check at a certain time, using the phrase "Time Check at....."

Example:

Z34D transmits:

Three Charlie – THIS IS Four Delta Time Check at Zero Nine Three Zero Zulu (Pause to allow operators to prepare) – One Five Seconds – One Zero Seconds – Five Four Three Two One – TIME Zero Nine Three Zero Zulu – OVER

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- c. Alternatively, a time check may be made by the Delayed Executive Method.

Example:

Z34D transmits:

Three Charlie – THIS IS Four Delta – EXECUTE TO FOLLOW – Tango
One Four One Five Zulu – BREAK – Six Nine – OVER

THIS IS Six Nine – ROGER – OUT

Z34D then transmits the executive signal to coincide with the time 1415:

Three Charlie – THIS IS Four Delta – Standby – EXECUTE – Nine Five –
OVER

THIS IS Nine Five – ROGER – OUT

802. GRID REFERENCES

- a. All grid references, including those encoded, are sent character by character, and all letters are to be pronounced phonetically. A grid reference in clear is easier to interpret if a pause is made between the two directional groups (i.e., between the 'east direction' and 'north direction' groups. Grid references are preceded by the proword GRID.

Example (In Clear):

Four Delta – THIS IS – Six Nine – Enemy at GRID – Three Two Six –
(pause) -Eight Four Seven – OVER

- b. When grid references are encoded in fixed low-grade codes, instructions relative to their use will apply.

803. BEADWINDOW PROCEDURE

- a. BEADWINDOW is a simple, rapid procedure for use by circuit operators to police the security of insecure voice networks. It brings to immediate attention of operators the fact that an Essential Element of Friendly Information (EEFI) has been disclosed on the circuit. Additionally, the

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BEADWINDOW report serves to alert other operators on the net of the EEFI disclosure and thus acts as an educational aid, producing increased security awareness among operators and an overall improvement in the security of insecure voice communications.

- b. Use of BEADWINDOW in operations and exercises is mandatory. Its use is encouraged on all maritime insecure voice circuits as a minimum.
- c. The BEADWINDOW procedure uses a codeword (BEADWINDOW) and a number combination which transmitted immediately to the station disclosing an EEFI. When a station on the net transmits information listed in an EEFI, the net control operator (or any operator on the net in the event the net control operator fails to take action), transmits the codeword BEADWINDOW, followed by the number of the EEFI which has been disclosed.

Example: If an operator discloses a ship's position (disclosing EEFI number one from the list below), the net control operator will call the offending station and transmit:

BEADWINDOW ONE – OVER

The only authorised reply to a BEADWINDOW report is ROGER – OUT.

- d. Approved broad EEFIs for general use are listed below. An appropriate keyword or key phrase has been allocated to each EEFI for ease of training and rapid understanding of BEADWINDOW reports. Additional EEFIs for specific operations or exercises may be developed and broad EEFIs expanded by individual nations or by operational commanders and included in operations plans or orders. This may be accomplished by adding new EEFI categories (i.e., 8, 9, 10) or by expanding existing categories (e.g., 21-force composition, 22-force capabilities, 23-force limitation, etc.). The EEFI List should be posted in clear sight of the operator at all insecure voice positions for rapid reference.
- e. EEFI List:

Key Number and Key Word Definition:

- 1. (Position). Friendly or enemy position, movement or intended movement, position, course, speed, altitude, or destination of any air, sea, or ground element, unit or force.
- 2. (Capabilities). Friendly or enemy capabilities or limitations, force compositions, or identity; capabilities limitations, or significant casualties

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to special equipment, weapons systems, sensors, units or personnel.
Percentages of fuel or ammunition remaining.

3. (Operations). Friendly or enemy operations – intentions, progress, or results. Operational or logistic intentions – assault objectives – mission participants – flying programs – mission situation reports – results of friendly or enemy operations.
4. (Electronic Warfare). Friendly or enemy EW/EMCON – intentions, progress, or results, intention to employ ECM – results of friendly or enemy ECM – objectives of ECM – results of friendly or enemy ECCM – results of Electronic Warfare Support Measures (ESM) – present or intended EMCON policy – equipment affected by EMCON policy.
5. (Personnel). Friendly or enemy key personnel. Movement or identity of friendly or enemy flag officers, distinguished visitors, unit commanders – movement of key maintenance personnel indicating equipment limitations.
6. (COMSEC). Friendly or enemy COMSEC breaches – linkage of codes or codewords with plain language – compromise of changing frequencies or linkage with line numbers/circuit designators – linkage of changing call signs with previous call signs or units – compromise of encrypted/classified call signs – incorrect authentication procedure.
7. (Wrong Circuit). Inappropriate transmission. Information requested. Transmitted or about to be transmitted which should not be passed on subject circuit because it either requires greater security protection or is not appropriate to the purpose for which the circuit is provided.
8. (As required) For assignments as required
9. (As required) For assignments as required
10. (As required) For assignments as required

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CHAPTER 9**PROCEDURES FOR REPORTING ENEMY CONTACTS****901. INTRODUCTION**

Enemy contact reports shall be transmitted using basic radiotelephone procedure, as modified in this chapter. Details of enemy contact reporting are contained in Allied Maritime Tactical Instructions and procedures, ATP-1 (C), Volume 1, Chapter 10.

902. TRANSMISSION OF ENEMY REPORTS

- a. Enemy contact reports are normally to be made once only when in direct communication with officer in tactical command, higher authority, or shore radio station, except:
 - (1) When using DO NOT ANSWER procedure (paragraph 619).
 - (2) When the text consists of emergency alarm signals, in which case the text is made twice, separated by I SAY AGAIN, with a time group in the ending.
- b. When a ship that is stationed on a screen transmits an emergency alarm signal, the screen station may be indicated in the preamble before precedence.
- c. If desired by the originator, a READ BACK may be requested (paragraph 620).
- d. Authentication, when in force, should be used when making initial, amplifying, and negative reports in plain language or a brevity code. Lack of, or incorrect, authentication should not prevent re-transmission or relay of the message to higher authority.

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903. EXAMPLES OF ENEMY CONTACT REPORTS

The WHEN component report of the contact may be transmitted either as the time group of the message or as the fourth component of the text. In the following examples, the former method is used with Abbreviated Plaindress Procedure (paragraph 502).

a. Initial Reports:

(1) Initial report in Standard Form as transmitted:

Four Delta – THIS IS Six Nine – FLASH – Locating One Serial One –
Four Delta Delta – Zero Nine Five Xray Xray One Four – Course Two
Seven Five – Speed Nine – Time Zero Nine Three Seven Zulu
AUTHENTICATION IS – OVER

THIS IS – Four Delta – ROGER – OUT

(2) Initial Report using emergency alarm signals, as transmitted:

Four Delta – THIS IS – Nine Five – Station Five – FLASH – Emergency
Quebec Zero Four Five Tack One Eight – I SAY AGAIN - Emergency
Quebec Zero Four Five Tack One Eight – TIME One Three Two Six Zulu
– AUTHENTICATION IS – OVER

THIS IS – Four Delta – ROGER – OUT

(3) Initial Report using ACP 165 Brevity Code, as transmitted:

Four Delta – THIS IS – Eight One – FLASH – Locating One Serial One –
Few Bogey (or Oscar Tango) – Two Four Six – Two Two – Closing –
TIME Two Three Zero One Zulu – AUTHENTICATION IS –
OVER

THIS IS – Four Delta – ROGER – OUT

(4) Initial Report in Abbreviated Form using READ BACK procedure,
as transmitted:

Four Delta – THIS IS Eight One – READ BACK – FLASH – Locating
Four Serial One – Three Juliett Juliett – Three Zero Zero Quebec Quebec
One Eight – TIME Zero Four Four Five Zulu – AUTHENTICATION IS
..... – OVER

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THIS IS Eight One – CORRECT – OUT

(5) Initial Report using DO NOT ANSWER procedure, as transmitted:

Four Delta – THIS IS Nine Two – DO NOT ANSWER – FLASH –
Locating Two Serial One – Many Bogies – Two Five Five Tango Tango
Five – Closing – TIME One Nine Zero Zero Zulu – AUTHENTICATION
IS I SAY AGAIN - Four Delta – THIS IS Nine Two – DO NOT
ANSWER – FLASH – Locating Two Serial One – Many Bogies – Two
Five Five Tango Tango Five – Closing – TIME One Nine Zero Zero Zulu
– AUTHENTICATION IS – OUT

b. Amplifying Reports:

(1) First Amplifying Report using ACP 165 Brevity Code, as transmitted:

Four Delta – THIS IS Nine Two – IMMEDIATE – Locating One Serial
Two – Altitude Zero Nine Zero – Three Zero Five Cape Bon Two One –
TIME One Zero Four Zero Zulu – AUTHENTICATON IS –
OVER

THIS IS Four Delta – ROGER – OUT

(2) Amplifying Report using groups from the Allied Maritime Tactical
Signal Book, as transmitted:

Four Delta – THIS IS Nine Two – IMMEDIATE – My One Three Two
Five Zulu – Papa Xray One Eight – TIME One Three Three Zero Zulu –
AUTHENTICATION IS – OVER

THIS IS Four Delta – ROGER – OUT

(3) Amplifying Report using READ BACK procedures, as transmitted:

Serial Three THIS IS – Nine Five – READ BACK – IMMEDIATE –
Locating Four – Tracking Zero Five Eight – TIME Zero Four Five Zero
Zulu – AUTHENTICATION IS - OVER

THIS IS – Nine Five – CORRECT – OUT

(4) Amplifying Report using DO NOT ANSWER procedure, as transmitted.

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Four Delta – THIS IS – Zero Six – DO NOT ANSWER IMMEDIATE –
Locating Two Serial Three – Altitude One Zero Zero –
AUTHENTICATION IS I SAY AGAIN – Four Delta – THIS IS –
Zero Six – DO NOT ANSWER IMMEDIATE– Locating Two Serial
Three – Altitude One Zero Zero – AUTHENTICATION IS - OUT

c. Negative Report, as transmitted:

Four Delta – THIS IS Zero Six – IMMEDIATE – Negative Enemy – Zero
Two Seven Quebec Quebec One Eight – Tack – One Two – TIME One
Eight Four Six Zulu – AUTHENTICATION IS - OVER

THIS IS – Four Delta – ROGER - OUT

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UNCLASSIFIED

Radiotelegraph Operations Guide

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Authorized by Headquarters AFCA
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Preface

To all MARS members:

Although radiotelegraph (CW) operation is no longer considered to be in the “mainstream” of military communications, there is a certain cadre of MARS operators who understand that CW is a valuable adjunct to support of the MARS mission and who enjoy the practice of their operating skills in this mode.

Development and use of other higher speed communications means has not decreased the need for well trained operators who can copy through natural and man-made interference. The capability to maintain communications using radiotelegraphy is a vital and basic requirement of USAF MARS. There is conclusive evidence of situations where CW operation provided the only usable method of communicating. MARS members must recognize the continuing requirements to establish and maintain the highest proficiency in radiotelegraph net operations.

There are opportunities to practice and hone your radiotelegraphy skills by participating in the TRANSCON CW operations. For information or the current net schedule contact the National TRANSCON CW Manager.

LISTEN, LISTEN, LEARN IS GOOD ADVICE!

On the nets you will pick up useful information and observe procedures and practices, but be careful that this information and procedures are correct. When in doubt ask your Training Director, State MARS Director (SMD) or an Area/Region official. Remember, we are all here to assist you in any way we can.

“There is no such thing as a dumb question!” The only dumb question is one that is not asked.

FROM THE TRANSCON CW MANAGER AND TRAINING DIRECTOR

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INTRODUCTION

On 22 Nov 2007 the Chiefs of Air Force, Army and Navy-Marine Corps MARS promulgated a document entitled *Standard Operating Procedure for Calling and Operating a Voice Net* (generally referred to as the “Voice SOP”) setting forth the procedures that would be required to be used on MARS nets as of 01 Jan 2008.

A similar SOP document has not yet been promulgated for other operating modes. However, the direction of the Chiefs is clear in that there should be the opportunity for maximum interoperability among the various MARS services. This interoperability is significantly enhanced if all three MARS services use common and standardized procedures.

The purpose of the SOP is to provide a set of standard procedures that will serve to encourage and support interoperability among the various MARS services. Having standardized procedures allows stations from one MARS service to participate in nets hosted by another MARS service without requiring additional training on the “unique” procedures of the host service. Such interoperability is not only desirable but may be crucial when fulfilling the role of providing emergency communications support.

To minimize confusion, this manual will use the following terms and substitutions:

1. A1B2 is a sample net designator
2. NCS is the net control station (this would be substituted with the net control’s actual call sign)
3. ANCS is the alternate net control station (this would be substituted with the alternate net control’s actual call sign)
4. FRQ1 represents a frequency designator
5. AAA, BBB, CCC, etc represent stations on the net. (**Note:** these are **not** abbreviated call signs. Abbreviated call signs are not authorized on USAF MARS nets.).

GENERAL CW NET OPERATING PRINCIPLES

All USAF MARS CW nets are directed nets unless declared otherwise by the NCS. This means every station must have NCS permission to transmit.

CW nets are under the direct and immediate control of the net control station (NCS). The NCS is responsible to maintain net discipline and to ensure that all stations are operating within prescribed frequency tolerance.

In the operation of a CW net, it is often expedient (but not a requirement) to have an Alternate Net Control station (ANCS) assigned in advance, or for NCS to designate an ANCS station at the start of the net. Frequency or band conditions may dictate, and/or the NCS could suddenly, and without warning, be gone from the net.

Stations must first be checked into a net before they may conduct any business on the net.

After stations have checked in, all stations are expected to maintain constant watch on the net, be prepared to respond when called, and be prepared to receive traffic at any time. Stations are expected to remain for the duration of the net unless granted permission by NCS to close down sooner.

Superfluous wording must be eliminated from transmissions. Stations are expected to use prescribed procedures at all times. Transmissions shall be short and concise, consistent with clarity.

Stations should strive to use appropriate operating signals. Generally, Z-codes are used on MARS networks. Q-codes may be used if no appropriate Z-code is available. Stations will use only authorized operating signals and abbreviations in accordance with their proper meaning only. See Appendix A for a listing of the most commonly used Operating Signals; Appendix B for a list of Radiotelegraph Prosigns; and Appendix C for list of all "Operating Signals (Q and Z codes)"; see pages A-1, B-1, and C-1 respectively.

Stations should not expect pleasantries or unnecessary explanations during a directed net. The use of personal names is not authorized while a net is in a formal status.

Record traffic must first be listed with the NCS, shall be passed to another station only at the direction of NCS, and only when the net is in directed net status.

Each character must be transmitted clearly and distinctly with correct weighting of code elements. The speed of transmission is governed by prevailing conditions and the capability of the receiving operator.

Accuracy in transmission is more important than speed. The time required sending a message at 18 WPM and that required to transmit it at 25 WPM is slight. Even this slight gain in time may be negated by any added time for repetitions.

The speed at which the receiving operator can copy without having to obtain repetitions is the speed at which the transmitting operator will transmit. When transmitting to more than one station in the net, the governing speed of transmission is that of the slowest receiving operator.

Message headings may be sent at a slower speed than the message text(s) depending on the receiving operator.

PRIOR TO OPENING THE NET

Check In of ANCS

If ANCS(s) have been preassigned for an upcoming net, the NCS will call each in order to determine readability and traffic status:

ANCS DE NCS INT QRK K

ANCS would respond to the Radio Check and traffic listing:

DE ANCS QRK 5 K

NCS will acknowledge:

DE NCS QRK 4 AR

And then proceed to call other assigned ANCS(s).

If an ANCS has not been assigned for the net, or if the NCS is unable to contact assigned ANCS(s), the NCS may appoint ANCS(s) as applicable or necessary after opening the net. See “**Appointing an ANCS**” on page 5

The NCS is responsible for having his/her transmitter accurately tuned to the assigned net frequency. Each station in the net must tune to the NCS even if the NCS is off frequency. If this is the case, net members should inform the NCS using appropriate operating signals.

OPENING A CW NET

Every net has a net designator as determined by type, administrative level, and location of the net. The net designator not only identifies a specific net, it also serves as a special case of collective call sign representing all stations checked into a net, or wishing to check in.

NCS will make sufficient call ups at the start of the net in an effort to capture all the stations wishing to check in. NCS then proceeds with handling listed traffic, then any other net business and comments between stations. Training should be conducted as required, or as directed by competent authority. Training will always be done with the net in directed net status.

Frequent call ups are important throughout the net.

At the designated time the Net Control Station (NCS) will call the net as follows:

NCS starts the net with a call up by transmitting:

A1B2 A1B2 DE NCS NCS ZRF ZRC2 (then depresses key for 10 seconds to permit zero beat)
ZRC1 AR

A1B2 A1B2 DE NCS INT ZKE K

Note:: The net designator is stated twice only in the first call up. This call up serves multiple functions. It announces the net, puts the net in directed net mode, and authorizes stations to transmit for such purposes as checking in and listing traffic.

Optionally: The NCS may use the operating signal ZKA.

A1B2 A1B2 DE NCS ZKA INT ZKE K

Subsequent call ups are made as follows:

A1B2 DE NCS INT ZKE K

Stations wishing to check in proceed to ZKE.

NCS must acknowledge all check ins. This should be done in the order stations checked in. NCS transmits:

A1B2 DE NCS R AAA II R BBB II R EEE II R CCC II R GGG AR

If NCS did not fully hear a station, example CCC, NCS withholds acknowledging that station, finishes the remainder of the acknowledgements, then transmits:

CCC DE NCS IMI K

If NCS heard a station but did not hear the call sign, or only part of the call sign, NCS transmits an unknown station call up. Note that only stations that attempted check in, but were not acknowledged are authorized to transmit at this time. NCS transmits:

AA DE NCS K

or

QRZ DE NCS K

If necessary, NCS may call the ANCS or another station on the net to relay an unknown station's transmission.

If NCS hears no stations during a net call, he/she may transmit:

DE NCS ZGN AR

and continues conducting net operations.

HOW TO CHECK INTO A CW NET

It is essential that every station, before transmitting, listen carefully to avoid doubling.

When you check in to a net, you are answering a collective call made by the NCS. The transmission will include the following elements: the prosign DE, your call sign, Z signal ZKE, your traffic status, and the prosign K. Here are some examples of answers to that call:

DE AAA ZKE QRU K (AAA checks in with no traffic)

DE BBB ZKE ZBO 1R CCC K (BBB checks in with 1 Routine for CCC)

DE CCC ZKE ZBO 1P DDD II 1P SEATTLE K (CCC checks in with 1 Priority for DDD and 1 Priority for Seattle)

FREE AND DIRECTED NET STATUS

All CW nets will always begin in directed net status. This means every station must have NCS permission to transmit. Record traffic may only be passed when the net is in directed net status.

After all traffic, training, and net business has been handled, NCS may put the net into Free Net status if Free Net is authorized by transmitting:

A1B2 DE NCS ZUG ZKB AR

Free Net means stations may contact each other directly without prior permission of NCS. A station may exchange informal comments with another station with the following limitations:

- (1) All comments must, in some way, relate to MARS business or the mission of MARS;
- (2) Comments need to be brief, consistent with clarity.
- (3) Stations must pause between turnovers in transmission to allow for another station to break in.
- (4) NCS may interrupt an exchange at any time and stop the exchange by calling a directed net.

The NCS may return the net to directed status by transmitting:

A1B2 DE NCS ZKB AR

or by making a net call:

A1B2 DE NCS INT ZKE K

ABBREVIATED CALL SIGNS

Abbreviated call signs are not authorized on USAF MARS nets.

ALTERNATE NET CONTROL STATION (ANCS)

In the operation of a CW net, it is often expedient (but not a requirement) to have an Alternate Net Control station (ANCS) assigned in advance, or for NCS to designate an ANCS station at the start of the net. Frequency or band conditions may dictate, and/or the NCS could suddenly, and without warning, be gone from the net.

The primary duties of the ANCS are:

- Serve as a back up to the NCS by logging check ins
- Assume NCS duties if the NCS is gone from the net
- Other duties assigned by the NCS

Appointing an ANCS

An NCS may appoint any station checked into the net as an ANCS. Usually this appointment should be made fairly early in the net to maximize the availability of the ANCS. To appoint BBB, for example, as an ANCS the NCS would transmit:

BBB DE NCS ASSUME ANCS K

To which BBB would respond:

DE BBB R K

And NCS will confirm with:

DE NCS R AR

CHANGING NET CONTROL STATION

Occasionally it may be necessary or desirable to transfer net control to another station. This could be for a brief period or for the duration of the net. Assuming NCS wishes to transfer net control to AAA:

AAA DE NCS ZKD K

AAA then responds:

DE AAA R AR

AAA is now NCS. AAA will immediately make a call up

A1B2 DE AAA ZKA II INT ZKE K

This notifies the net that AAA has assumed net control, puts the net in directed status, and authorizes stations to check in or otherwise contact NCS.

Variations could include some instruction from NCS to AAA such as:

AAA DE NCS ZKD 10 MINUTES K or
AAA DE NCS ZKD UNTIL (state a time) K

When the NCS returns and wishes to resume control, he will, at a call up or on a free net, transmit:

AAA DE NCS INT ZKD K

At this point AAA will acknowledge NCS and notify NCS of any changes in net status, new traffic listings, traffic passed, and stations that checked in or closed down while AAA was net control. The NCS will acknowledge this information then make a call up. (It is never acceptable for NCS to tell AAA, "I was monitoring the entire time and have all the information." This does not confirm to AAA that NCS in fact does have all the information.)

Loss of NCS

It may happen that NCS suddenly, and without warning, disappears from the net. This could be due to equipment failure, power outage, sudden change in propagation, or any number of reasons. If an ANCS has been assigned in advance and he or she suspects something has happened to NCS, that station will first attempt to contact NCS. If no contact is made ANCS will ASSUME CONTROL, make a call up, and proceed as outlined above. If no ANCS has been designated any station who hears the net well shall assume NCS duties.

PASSING TRAFFIC

Record traffic must first be listed with the NCS, shall be passed to another station only at the direction of NCS, and only when the net is in directed net status.

The NCS directs the passing of traffic by calling the station holding the traffic and instructs that station to send the traffic to another station; e.g.

AAA DE NCS ZOG P BBB AR

AAA then calls BBB

BBB DE AAA INT QRV K

BBB having heard AAA's call with good readability and being ready to copy the traffic responds:

DE BBB QRV K

If BBB was experiencing difficulty copying AAA, BBB could add a readability qualifier to his response to alert AAA that copy is difficult and that it might be appropriate to send the traffic at a slower speed; such as:

DE BBB QRV QRK 4 K

AAA then proceeds to send the traffic; e.g.

BBB DE AAA NR 2 II P 230234Z APR 2009 II FM JOHN SMITH II TO HENRY
FIELD. . .

BT

[Text of Message]

BT

K

If the message was received satisfactorily BBB would transmit:

DE BBB R NR 2 AR

Or alternatively:

DE BBB R AR

Requesting Fills and Repeats

Assume the following message has been sent:

BBB DE AAA NR 8 II P II 231426Z APR 2009 II
FM AFA5ZZ II
TO AFA7ZZ II
INFO AFA6ZZ II
GR 13

BT

MY 222300Z APR 2009 PROCEDE ON ASSIGNED MOVEMENTS MAKE REPORTS
ON CIRCUIT 03A

BT K

- 1) If the receiving station (BBB in our example) was unable to copy the message from the sending station (AAA in our example) and wished to have the entire message repeated, BBB would transmit:

DE BBB IMI K

AAA would then repeat the entire last transmission. BBB then either receipts for the message or requests additional fills.

- 2) If the receiving station missed a single word the receiving station can request a repeat of that specific word using the prosign WA to request the word after a correctly copied unique word or the prosign WB to request the word before a correctly copied unique word. For example if BBB missed the word after "CIRCUIT" BBB would transmit:

DE BBB IMI WA CIRCUIT K

And AAA would respond:

DE AAA WA CIRCUIT 03A K

AAA would then either receipt for the message or as for additional fills.

- 3) If the receiving station misses a portion of the message he/she may request a repeat of that portion by requesting a repeat from a specific point in the message to another specific point in the message. For example if BBB missed the addressee and any other information prior to the BT, BBB would send:

DE BBB IMI AFA7ZZ TO BT K

AAA would respond:

DE AAA AFA7ZZ II AFA7ZZ II INFO AFA6ZZ II GR 13 BT K

AAA would then either receipt for the message or as for additional fills.

BREAKING THE NET

A station may interrupt the current flow of communications on a net if he or she has a communication of higher precedence which must be conveyed as quickly as possible. Such communications includes:

- (a) record traffic of a higher precedence than the traffic being passed;
- (b) non-record traffic communication for one or more stations that is urgent, time sensitive, and may impact the safety of persons or property.

The station wishing to break the net should wait for the next natural pause in the communication currently taking place; preferably waiting for the end of that communication. The content of the breaking station's communication should be the determining factor for establishing urgency, not simply that the station has, for example, a PRIORITY precedence message and a ROUTINE message is currently being sent. Breaking the net is a rare event. Normally, waiting a minute or two is not going to make a difference. If the breaking station knows the current communication is lengthy or several messages are going to be sent then interrupting may be necessary.

EXAMPLE:

When a station has determined it is essential to break the net he or she shall wait for a pause in the current transmission. He or she will then transmit a series of long dashes. Upon hearing the attempt to break the net all stations will cease transmissions in order for the higher priority traffic to be cleared.

The breaking station then transmits his/her traffic listing:

NCS DE AAA ZBO 2P HUNTSVILLE AL K

The NCS will acknowledge the traffic listing:

DE NCS R AAA ZBO 2P HUNTSVILLE AL AR

And then clear the traffic. Once the traffic is complete, the NCS will return to the stations that were passing traffic prior to the breaking of the net.

If it is evident that NCS does not hear the breaking station any station on the net may relay by calling NCS and advising him or her of the breaking station. This should normally be one of the stations being interrupted. If NCS hears the breaking station, but it appears the station currently engaged in communications did not, NCS will acknowledge the breaking station by transmitting

AAA DE NCS AS AR

NCS will then take steps to regain control of the net.

CLOSING DOWN THE NET

At the appointed time for a net to end, and NCS is satisfied that all traffic has been handled, NCS will close the net as follows:

A1B2 DE NCS ZKJ1 II ZKJ2 AR

It is imperative that NCS be aware whether a net is authorized to continue on past the designated end time. If it is not, NCS must arrange with stations holding traffic to dispose of that traffic on another net. This must be done well enough in advance of net end time to adequately take care of this business.

In some cases NCS may be authorized to close down a net before the designated end time. For example, B1C3 net is assigned a one hour slot, but is authorized to close down after 30 minutes of operation if there is no further traffic or business to handle.

Once the net is closed down no further transmissions are authorized.

OPERATING SIGNALS (Q and Z Signals) AND PROSIGNS

Operating signals and prosigns are concise and specific signals designed primarily for use by communications personnel in exchanging information incident to the handling of messages or in establishing communications. They are also used in service messages and other forms of messages between communication personnel. Operating signals provide no security and therefore must be regarded as the equivalent of plain language.

The “Z” signals shown in Appendix A and Appendix C are designed to cover military requirements and should be used whenever necessary in military communications. The “Q” signals shown in Appendix A and Appendix C may be used in military communications where no suitable “Z” signal exists. Only “Q” signals will be used in Non-military communications.

The meaning of “Q” and “Z” operating signals may be amplified or completed by the addition of appropriate call signs, time groups, complementary groups, and so forth. Call signs used to complement an operating signal normally follow the signal, but under certain conditions, such as to achieve clarity or to effect separation, they may be placed ahead of the operating signal. Plain language is prohibited except when no other method is provided to complete the meaning.

When desired, an operating signal may be given an interrogative sense:

- a) When communicating with military stations by inserting the prosign “INT” before the “Q” or “Z” signal.
- b) When communicating with nonmilitary stations, by inserting the prosign “IMI” after the “Q” signal and data used with it.

Operating signals should not normally be used in radiotelephone or voice net procedures. Instead, the operating information will be conveyed by concise phrases. When it is necessary to relay operating signals over voice circuits, that is, in messages, they are transmitted by their phonetic equivalents.

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

A listing of the most commonly used Operating Signals is shown in Appendix A.

A listing of the most commonly used prosigns is shown in Appendix B.

Appendix A COMMONLY USED OPERATING SIGNALS

Signal	Meaning	Signal	Meaning
ZAX	You are causing interference	QRK	Readability (1 – 5)
ZBL	Do not use break-in	QRQ	Send faster
ZBO	I have traffic	QRS	Send slower
ZBT	Count _____ as _____ group(s)	QRU	I have nothing for you
ZDE	Message undelivered	QRV	I am ready
ZEU	Exercise message	QRY	Your turn is _____
ZKA	I am ncs	QRZ	You are being called by _____
ZKB	Obtain permission before transmitting	QSA	Signal strength (1 – 5)
ZKD	Take net control	QSG	Send _____ messages at a time
ZKJ	I am closing down	QSO	I can communicate with _____
ZKS	Following stations are in the net	QSV	Send V's
ZOD	Act as relay	QSZ	Send words twice
ZOE	Send me your message for _____	QTB	I do not agree with your group count
ZOG	Send your message to _____		
ZRA	Your frequency is (1. Correct) (2. High) (3. Low)		
ZRB	Check your frequency		
ZRC	Tune your transmitter to (1. Proper frequency) (2. Zero beat)		
ZRF	Send tuning signal		

1. Operating signals have interrogatory sense when preceded by INT.
2. See Appendix C for complete listing of Q and Z code signals.

Appendix B

RADIOTELEGRAPH PROSIGNS

Prosign	Meaning	Prosign	Meaning
<u>AA</u> (*)	Unknown station	INFO	Information addressee
AA	All After	<u>INT</u>	Interrogatory
AB	All Before	J	Verify with originator and repeat
<u>AR</u>	End of transmission	K	Invitation to transmit
<u>AS</u>	Short wait	M	Deferred
<u>AS AR</u>	Long wait	N	Negative, No, Not received
B	More to follow	NR	Number
<u>BT</u>	Long break	O	Operational immediate
C	Correct, Yes	P	Priority
DE	From	R	Received, Routine
EEEEEEEE	Error	T	Station called transmit to all addressees
F	Do not answer	TO	Action addressee
FM	Originator's callsign	WA	Word after
G	Repeat back	WB	Word before
GR	Group count	XMT	Exempted addressee
SVC	Service Message	Y	Emergency
II	Separative Sign	Z	Flash
<u>IMI</u>	Repeat		

(*). Underlined prosigns designate letters to be sent without any separation between letters.

Appendix C

List of 'Z' Signals from ACP-131

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZAA	-	You are not observing proper circuit discipline.
ZAL	-	I am closing down (until...) due to...
ZAX	-	You are...(1. Causing interference. Listen before sending. 2. Causing interference by inattention to order to wait; 3. Sending at the same time as...(call sign); 4. Causing delay by slowness in answering. 5. Causing delay by slowness in answering my service or procedure messages; 6. Answering out of turn).
ZBE	-	Retransmit message...to... (for...)(1. Action; 2. Information).
ZBH	-	Make preliminary call before transmitting traffic.
ZBK	Are you receiving my traffic clear?	I am receiving your traffic... (1. Clear; 2. Garbled).
ZBL	-	I am unable to receive you while I am transmitting. Do not use break-in procedure.
ZBO	-	Of what precedence(s)? I have (or...has)...(numeral followed by precedence prosign for each precedence) message(s) for you (or for...).
ZBU	-	Report when you are in radio communication with...
ZDA	-	I have a formal message for you. (precedence is...).
ZDE	-	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.

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZDF	-	Message...was received by...(addressee designation) at...Z or was (1. Received by action addressee(s) at...Z; 2. Received by information addressee(s) at...Z; 3. Received by all addressees at...Z; 4. Received by action addressee(s) message center at...Z; 5. Received by information addressee(s) message center at...Z; 6. Received by all addressees' message center at...Z; 7. Delivered by broadcast at...Z; 8. Forwarded by commercial means at...Z; 9. Mailed at...Z).
ZDG	-	Accuracy of following message(s) (or message...) is doubtful. Correction or confirmation will be forthcoming.
ZDH	-	Request corrected copy of message be forwarded to...
ZDK	-	Will you repeat message...(or Following repetition (of...) is made portion...) (or will you rerun in accordance with your request. number)?
ZDO	-	I could not send message...to...
ZDQ	-	Message...was relayed to...at... by...(on...kHz (or MHz)).
ZEK	-	No answer is required.
ZEN	-	This message has been delivered by a separate transmission or by other means (1. Messenger/courier; 2. Mail) to the addressee(s) immediately following this operating signal.
ZEO	-	Transmit this message by rapid means when no charges are involved and to all others by mail.
ZEQ	-	Your message...has been missent to this station...(1. Request you retransmit to correct addressee; 2. I will retransmit to correct addressee).
ZES	-	Your message...has been received...(1 Incomplete; 2. Garbled). Request retransmission.
ZEU	-	Exercise (drill) message.
ZEV	-	Request you acknowledge Message (or message...) is message... acknowledged.

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZEW	-	Your attention is invited, for... (1. Action; 2. Information) to message...which is in your files.
ZEX	-	This is a book message and may be delivered as a single-address message to addressees for whom you are responsible.
ZFD	-	This message is a suspected duplicate.
ZFE	-	Pass message...(which is in your files) to addressee(s) for whom you are responsible using the indicated supplementary heading
ZFF	-	Inform me when this message (or message...) has been received by... (addressee designation) or by... (1. Action addressee(s); 2. Information addressee(s); 3. All addressee(s); 4. Action addressee's/ addressees' message center; 5. Information addressee's/addressees' message center; 6. All addressees' message center).
ZFG	-	This message is an exact duplicate of a message previously transmitted.
ZFH	-	This message (or message...) is being (or has been) passed to you (or...) for...(1. Action; 2. Information; 3. Comment) (at the request of...)
ZFR	-	Cancel transmission...(made under channel or station serial number...).
ZGE	-	Send your call sign(s) once (or... times) on this frequency (or on ...kHz (or MHz)).
ZGP	-	Answer calls for me on present frequency (or on...kHz (or MHz)).
ZHA	-	Shall I decrease frequency Decrease frequency very slightly (or very slightly (or...kHz) ...kHz) to clear interference. to clear interference?
ZHB	-	Shall I increase frequency Increase frequency very slightly (or very slightly (or...kHz) ...kHz) to clear interference. to clear interference?
ZHQ	-	Please listen for me on...kHz (or MHz) and transmit to me on...kHz (or MHz).

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZIC	-	What is (are) station serial Station serial number(s) or channel number(s) or channel number(s) number(s) of last message(s) transmitted to me (or to...)? of last message(s) you transmitted to you (or to...) is (are)...
ZID	-	What is (are) station serial Station serial number(s) or channel number(s) or channel number(s) number(s) of last message(s) received of last message(s) received from you (or from...) is (are)... from me (or from...)?
ZIE	-	Station serial number(s) or channel number(s) (from...) has (have) not been received. Repeat message(s) or cancel serial number(s) or channel number(s).
ZJN	-	Message...has been passed to those for whom I am responsible (or to...) (at...) but "L" has not been received.
ZJO	-	Repeat back each group of the text of this message as it is transmitted.
ZKA	Who is controlling station (net control station) on this frequency (or on... kHz (or MHz))?	I am (or...is) controlling station (net control station) on this frequency (or on...kHz (or MHz)).
ZKB	Is it necessary to obtain the permission of the controlling station (net control station) before transmitting messages?	It is necessary to obtain the permission of the controlling station (net control station) before transmitting messages.
ZKC	-	Substitute code sign (call sign) of control station of group (net) in place of this operating signal.
ZKD	Shall I take control of net Take control of the net (for...) (for...) (until...)? (until...).	-
ZKE	-	I (or ...) report(s) into the circuit (net).
ZKF	-	Station leaves net temporarily (or for...minutes) (to communicate with...) (will be on...kHz (or MHz)).
ZKG	-	Observe (or direct...to observe) schedule with...on...kHz (or MHz) (at...).
ZKH	-	Did you (or...) observe I (or...) observed schedule with schedule with...at...? ... (at...).
ZKI	-	Set watch on...kHz (or MHz)... (1. Continuous; 2. Until further notice).

-	Question:	Answer, Advice or Order:
ZKJ	May I close down (until...)? 2. I am closing down (until...)	...(1. Close down (until...);
ZKL	-	Resume normal radio communication now (or at...).
ZKM	-	Take guard (for...) (on...kHz (or MHz)).
ZKN	-	I have taken over guard on...kHz (or MHz).
ZKO	-	I have handed over guard (to...) (on ...kHz (or MHz)). (Serial number of last message received was...
ZKP	Are you (or is...) radio guard I am (or...is) radio guard for... for... (on...kHz (or MHz))? (on...kHz (or MHz)).	-
ZKR	On what frequencies are you I am (or...is) maintaining watch on (or...) maintaining watch? ...kHz (or MHz).	-
ZKS	What stations are keeping Following stations are keeping watch on...kHz (or MHz) (or on...kHz (or MHz) (or are in net). are in net)?	-
ZKT	-	Am keeping watch on...kHz (or MHz) for...(1. First five minutes in each half hour; 2. From 10 to 15 and 40 to 45 minutes past the hour; 3. Between...and...minutes past the hour).
ZKU	-	I am (or...is) maintaining continuous watch, or (1. Single operator period; 2. Two operator period; 3. General periods only; 4. Reduced single- operator period) on...(call sign)... Broadcast.
ZKV	-	I am (or...is) standing split phone watch on...and...kHz (or MHz).
ZLN	-	Facility indicated cannot be operated at present.
ZNB	What is authentication of... 1. Message; 2. Last transmission; 3. ...)?	Authentication (of...) is... (1. Message...; (2. Last transmission; 3. ...).
ZNC	-	All transmissions will be authenticated...(1. On all circuits; 2. On this circuit; 3. On...frequency).
ZND	-	You are using authenticator incorrectly...(1. Verify authenticator system key; 2. Check authentication of your last transmission).
ZNE	-	I am prepared to authenticate.

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZNQ	-	This message (or message...) received at this station... (1. Without authentication (when authentication is in force); 2. Incorrectly authenticated).
ZNR	-	This message may be forwarded without change by radio or non-approved circuit.
ZOB	-	Take (I will take) no further action regarding forwarding message...
ZOC	-	Station(s) called relay this message to addressees for whom you are responsible.
ZOD	-	Act as radio link (relaying station) between me and...(or between...and ...).
ZOE	Can you accept message for...? (1. On-line; 2. Off-line).	Give me your message. I will dispose of it...(1. On-line; 2. Off-line)
ZOF	-	Relay (pass) this message (or message...) to...now (or at...).
ZOG	-	Transmit (pass) this message (or message...) to...(for...) (1. Action; 2. Information).
ZOH	-	Send message for...on...kHz (or MHz) by...(1. Receipt method; 2. Broadcast method; 3. Intercept method).
ZOK	-	Relay this message via...
ZOM	-	Delivery of this message by mail in lieu of broadcast permissible (to...).
ZOP	-	This message (or message...) has been delivered to all broadcast areas (or to the following specific broadcast area(s)...).
ZOQ	-	Deliver this message (or message...) to all broadcast areas (or to the following specific broadcast area(s)...).
ZOR	-	1. Route traffic for...via...area broadcast; 2. Beginning at... traffic for you (or...) will be routed via...area broadcast.
ZOS	Request area routing for messages for...	Area routing for messages for... is...
ZOT	-	Transmit or handle this message at the lower precedence to the station or address designator(s) which follow(s).

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZOU	How should traffic for... be routed?	Route traffic for...through...(on... kHz (or MHz)).
ZOV	-	Station designation preceding this operating signal is the correct routing for this message, rerouted by...
ZOY	-	Relay this message only to the station(s) whose designation(s) precede this operating signal.
ZPA	-	Your speech is distorted.
ZPB	-	Your transmitter has strong radiation while idling.
ZPC	-	Your signals are...(1. Fading badly; 2. Fading slightly; 3. Good for... ..words per minute; 4. Getting stronger; 5. Getting weaker).
ZPE	-	Maximum power is now being radiated.
ZPF	What is the readability of the signals of the group (net) (or of...)?	The readability of the signals of the group (net) (or of...) is... (1 to 5).
ZPG	What is (are) signal strength(s) of group (net) (or of...)?	Signal strength(s) of the group (net) (or of...) is... (1 to 5).
ZPO	-	The text of this message is to be relayed in precisely the same format as that in which it is received. No characters or machine functions are to be added, inserted or deleted and the relative positions of the groups are to be retained.
ZPT	-	This transmission is a transmitter pre-acceptance trial. Request expeditious strength and readability reply.
ZPW	-	This message cancelled at time indicated. File without further transmission.
ZRA	How does my frequency check?	Your frequency is...(1. Correct; 2. Slightly (or...Hz (or kHz)) high; 3. Slightly (or...Hz (or kHz)) low; 4. Stable on steady mark; 5. Stable on steady space; 6. Unstable; 7. Erratic).
ZRB	-	Check your (or...'s) frequency on this circuit (or on...kHz (or MHz)).
ZRC	Shall I tune my transmitter? (1. Proper frequency; 2. Zero beat with your (or...) transmitter).	Tune your transmitter to... (1. Proper frequency; 2. Zero beat with my transmitter (or...) to...

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZRD	What is the frequency of the... radio facility now in operation?	The frequency of the...radio facility now in operation is...
ZRE	On what frequency do you hear me best?	I hear you best on...kHz (or MHz).
ZRF	Will you send tuning signal on your present frequency (or on...kHz (or MHz)) for one minute or until AS is given?	Am about to send tuning signal on my present frequency (or on...kHz (or MHz)).
ZRG	When will a change of frequency (to...kHz (or MHz)) be necessary?	A change in frequency (to...kHz (or MHz)) will be necessary at approximately...
ZRH	Is my frequency shift correct?	Your frequency shift is...(1. Too wide; 2. Too narrow; 3. Not linear; 4. Correct) (by Hz).
ZRJ	Will you check your...?	I will check my...
ZRQ	-	Change to other sideband.
ZRR	-	Message(s) number(s)...will no longer be broadcast but are effective and of interest (to units indicated).
ZRS	-	Your carrier is...(1. Over-suppressed; 2. Under-suppressed).
ZRT	-	Radiate full unmodulated power for...minutes.
ZRU	Are my tone and frequencies correct?	Your tone for...(1. Marking spacing are high; 2. Marking and spacing are low; 3. Marking and spacing are correct).
ZTJ	-	Cease using...
ZTK	Are you (or is...) connected to...?	I am (or...is) connected to...
ZTL	Are you (or is...) about to disconnect?	I am (or...is) about to disconnect.
ZTM	-	I (or...) is unable to use...
ZTS	Is the line satisfactory?	The line is...(1. Satisfactory; 2. Unsatisfactory).
ZUA	Request a timing signal now (or at...).	Timing signal will be transmitted now (or at...) The numerals indicating the time will be followed by a five-second dash terminating exactly at the time indicated.
ZUB	-	At...
ZUC	-	From...to...
ZUD	-	Until further orders (or until...).

-	<u>Question:</u>	<u>Answer, Advice or Order:</u>
ZUE	-	Affirmative (Yes).
ZUG	-	Negative (No).
ZUH	-	Unable to comply.
ZUJ	-	Stand by.
ZVR	-	Retransmit this message (or message...) at once to all-subordinate stations.
ZWL	-	No forwarding action to the designation(s) immediately following is required.
ZWM	-	Correct answer to last question (or question...) is...(or will be found in...).
ZWN	-	Correct version of the part of the last message (or message...) which was sent incorrectly is...(or will be found in...).
ZXD	-	This message is to be delivered to the addressee(s) in tape form.
ZXO	-	Request you obtain retransmission of messages...from station...
ZXT	-	This message is not to be transmitted by radio telegraph or radiotelephone in any form over part of its route
ZXW	-	This message has been delivered to all action addressees whose designations follow this operating signal.
ZXX	-	This message has been delivered to all information addressees whose designations follow this operating signal.
ZXY	-	Transmit this message to the addressee(s) indicated by the numeral(s) following... All addressees are to be counted consecutively as they appear (numbers to be separated by the Separative Sign).

List of 'Q' Signals from ACP-131

	<u>Question:</u>	<u>Answer, Advice or Order:</u>
QRA	What is the name of your station?	The name of my station is...
QRG	Will you tell me my exact frequency (or that of...)?	Your exact frequency (or that of...) is...kHz (or MHz).
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is the tone of my transmission?	The tone of your transmission is: 1) good. 2) variable. 3) bad.
QRJ	How many radiotelephone calls have you to book?	I have...radiotelephone calls to book.
QRK	What is the intelligibility of my signals (or those of...)?	The intelligibility of your signals (or those of...) is... 1) bad. 2) poor. 3) fair. 4) good. 5) excellent.
QRL	Are you busy?	I am busy (or I am busy with...) Please do not interfere
QRM	Are you being interfered with?	I am being interfered with (1. nil 2. slightly 3. moderately 4. severely 5. extremely).
QRN	Are you troubled by static?	I am troubled by static (1. nil 2. slightly 3. moderately 4. severely 5. extremely).
QRO	Shall I increase transmitter power?	Increase transmitter power.
QRP	Shall I decrease transmitter power?	Decrease transmitter power.
QRQ	Shall I send faster?	Send faster (...words per minute).
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at...words per minute.
QRS	Shall I send more slowly?	Send more slowly (...words per minute).
QRT	Shall I stop sending?	Stop sending.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready.
QRW	Shall I inform...that you are calling him on...kHz (or MHz)?	Please inform...that I am calling him on...kHz (or MHz).
QRX	When will you call me again?	I will call you again at...hours (on...kHz (or MHz)).
QRY	What is my turn?	Your turn is number...(or according to any other indication).
QRZ	Who is calling me?	You are being called by...(on...kHz or MHz).
QSA	What is the strength of my signals (or those of...)?	The strength of your signals (or those of...) is... 1) scarcely perceptible. 2) weak. 3) fairly good. 4) good. 5) very good.
QSB	Are my signals fading?	Your signals are fading.
QSD	Is my keying defective?	Your keying is defective.
QSG	Shall I send...telegrams at a time?	Send...telegrams at a time.

	<u>Question:</u>	<u>Answer, Advice or Order:</u>
QSH	Are you able to home on your D/F equipment?	I am able to home on my D/F equipment (on station...).
QSI	(N/A)	I have been unable to break in on your transmission or Will you inform...(call sign) than I have been unable to break in on his transmission (on...kHz (or MHz).
QSJ	What is the charge to be collected to...including your internal telegraph charge?	The charge to be collected to... including my internal telegraph charge...francs.
QSK	Can you hear me between your signals and if so can I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram which I sent to you (or some previous telegram)?	Repeat the last telegram which you sent me (or telegram(s) number(s)...
QSN	Did you hear me (or...(call- sign)) on...kHz (or MHz)?	I did hear you (or...(call sign)) on...kHz (or MHz).
QSO	Can you communicate with... direct or by relay?	I can communicate with...direct (or by relay through...).
QSP	Will you relay to...free of charge?	I will relay to...free of charge.
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).
QSS	What working frequency will you use?	I will use the working frequency...kHz (normally only the last three figures of the frequency need be given).
QSU	Shall I send or reply on this frequency (or on...kHz (or MHz) (with emissions of class...)?	Send or reply on this frequency (or on...kHz (or MHz)) (with emission of class...).
QSV	Shall I send a series of V's on this frequency (or...kHz(or MHz))?	Send a series of V's on this frequency (or on...kHz (or MHz)).
QSW	Will you send on this frequency (or on...kHz (or MHz)) (with emissions of class...)?	I am going to send on this frequency (or on...kHz (or MHz)) (with emissions of class...).
QSX	Will you listen to...(call- sign(s)) on...kHz (or MHz)?	I am listening to...(call sign(s)) on...kHz (or MHz).
QSY	Shall I change to transmission on another frequency?	Change to transmission on another Change to transmission on another
QSZ	Shall I send each word or group more than once?	Send each word or group twice (or...times).
QTA	Shall I cancel telegram number...?	Cancel telegram number...
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.

	<u>Question:</u>	<u>Answer, Advice or Order:</u>
QTH	What is your position in latitude and longitude (or according to any other indication)?	My position is...latitude...longitude (or according to any other indication).
QTR	What is your time?	The time is...
QTU	What are the hours during which your station is open?	My station is open from...to...hours.
QTV	Shall I stand guard for you on the frequency of...kHz (or MHz) (from...to...hours)?	Stand guard for me on the frequency of...kHz (or MHz) (from...to... hours).
QTX	Will you keep your station open for communications?	I will keep my station open for communications.
QUA	Have you news of ...?	I have news of