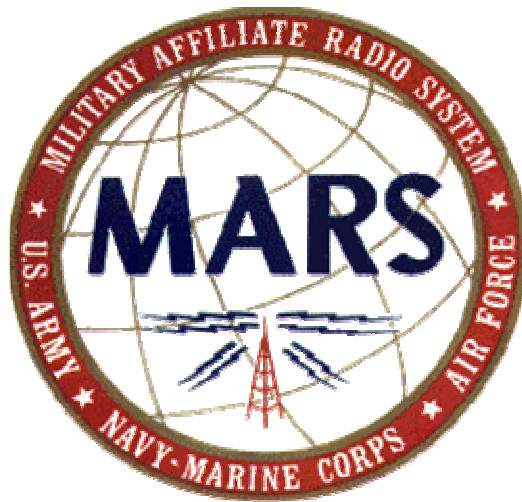


U.S. Navy-Marine Corps Military Affiliate Radio System (MARS)



ECOM Training Guide Region 10

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NNNOASE TWO/NNNOASO TWO/NNNOEHG

Region 10 ECOM Training Guide

Complete each lesson, sending any answers/reports to
NNNOASO FOUR (nnn0as0-4@navymars.org)

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Required Materials to have on hand

NTP8(D) Annex D
Pacific Area Operations Guide Annex C
Region Ten ECOM Plan
State ECOM Plan
Pacific Area ECOM Tool Kit
Region Ten Web Page / Nets-MBOs

NOTE 1: For the sake of brevity, all reference to the Region/State Director also includes the staff position of Assistant Director.

NOTE 2: For some Chapter questions you will need to use the reference material listed for that lesson.

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LESSON ONE INTRODUCTION

Items to have on hand in front of you:

NTP8(D) Annex D
Pacific Area Operations Guide Annex C
Region 10 ECOM plan
Your state ECOM plan (primary guide)
Your copy of the Pacific Area ECOM "Tool Kit"

Questions:

1. Does anyone need assistance in obtaining any of these documents?
2. Which document is your primary guide?
3. Do you need to take all these documents with you for field operations?

LESSON TWO TOOL KIT & PERSONAL "GO" KIT

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(Ref: TOOL KIT, page 4)

Now lets start with what's contained in the Pacific Area ECOM TOOL KIT. This document is just what it says. A TOOL KIT of materials to be used as a quick reference in the shack or field, but like all tools it needs to be kept harp, up to date and ready to use.

You may want to add some of your own personal family, community or local area information to it also. The TOOL KIT is divided into sections covering an ECOM operation from start to finish. Including your 72 hour "GO" kit, personal and ART radio equipment ideas, who and how to notify when something happens. How to establish an ECOM net, who and how to notify.

Sending an EEI, SITREP or refilling a message from SHARES, Amateur Radio and other MARS groups, how we fit into the incident command structure, and basic station operations, logging, etc.

Lets first look at our personal "GO" or "JUMP" KIT that you always carry. You will find a suggested list on page 4 of the TOOL KIT, included is your MARS DOD ID Card. Updated ones are available by contacting your State Director and requesting one. Remember you need to have completed the FEMA (Federal Emergency Management Agency) ICS (Incident Command System) courses for a field certified card now.

Have a MARS cap or jacket/jumpsuit so you are easily identified. In a small pack or belly bag, include 3 days worth of any medications you may need, some snacks, a folding cup or water bottle, small poncho, a space blanket, a small first aid kit and a FRS (Family Radio Service) radio for interops and short range communications.

This will get you to the recovery state of any event especially if there is any kind of shelter and commissary available.

Questions:

1. Do you need help finishing the FEMA ICS courses?
2. Do you have a suggestion or question about the personal "GO KIT"?
3. Does the personal GO KIT stay in camp or travel with you at all times?
4. Why have a FRS radio?

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LESSON THREE RADIO STATION JUMP KIT

(Ref: TOOL KIT, pages 4, 5)

(Ref: your State ECOM Plan)

In a separate pack or rolling suitcase, pack your radio equipment you intend to take to the site:

VHF Radio (w/simple use notes) and antenna
(rubber duck, mag mount and/or J pole)
Power cord for AUX power (w/connectors, most are using the
Anderson power pole type)
50 FT coax, you operate from inside, out of the weather.
HF RADIO (w/simple use notes, mic and tuner)
Power supply and cable w/connectors
Antenna (mobile or simple multi band dipole)
Telescoping antenna mast
Cord for mounting mast or hanging the dipole
LAP TOP COMPUTER (w/software for MT63, RTTY AND AMTOR modes)
TNC (for Pactor, AMTOR digital communications or interface and a sound
card interface for sound card modes)
Connectors for AUX Power
Head Phones and adaptors
Power extension cord
Tarp for outdoor station cover
Folding chairs
Small table
MARS sign
Clip boards
Message blanks printed out
Station log sheets printed out
Notebook, pen and pencils, scratch paper, paper clips, stapler, 3 hole
punch, tape, string, battery desk lamp, etc.

Questions:

1. Does anyone have a nifty antenna for quick field ops?
2. Does this antenna need to be a long range one or just a NVIS
(Near Vertical Incidence Skywave) antenna?
3. Does each member need to have the complete radio station jump kit?

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LESSON FOUR WHAT TO DO WHEN 'IT' HAPPENS

(Ref: TOOL KIT, page 3)

(Ref: your State ECOM Plan)

When an incident happens there are several things each member needs to do, some should be done prior to any event.

FIRST: Assemble your personal 72 hr kit and have plans made for family safety. Practice grabbing kit and an established routine for the family of who gets what, where you meet in a safe place and who is your OUT OF TOWN family coordination contact. Also you should keep your ART Captain, State ECOM Assistant and/or State Director aware of your capabilities. Many of us have multiple involvement with NMCM, ARES, local Fire Departments, Red Cross, etc. Be certain each knows where your priority of service will be. **THEY ARE COUNTING ON YOU!**

SECOND: If the event has already happened and your station is unaffected you should check into either the PALE net or your local state ECOM net. There you will be able to let your ECOM staff know what your availability is and the equipment you can make use of.

This includes extra portable radios, power systems, antennas, shelter, tables and chairs, transportation, etc. When you check in you will be directed to the net for your local area. Check in there and then maintain a silent watch, but offer your assistance if you can relay a weak station. Do not fill up the air waves with idle chatter.

THIRD: If the event seems to be of any significance prepare and send an EEI message by email and MDS. If you are in question if one is needed - SEND IT! Also if it is an impending event notify your State Director or ECOM assistant by any means available or start your state "Call Out System".

FOURTH: If you have been asked for NMCM support (REMEMBER IT MUST BE REQUESTED, WE CAN'T GO ASKING 'IF' THEY NEED ASSISTANCE), again check into the local ECOM net and inform the NECOS of the request and assist in sending an "Implementation Message" via the fastest means available, email and/MDS. For ALL Hazmat events stay up hill, up wind and far enough away so you can hide the event with your thumb at arm length.

FIFTH: During an event we must file occasional EEI UPDATES and SITREP messages as needed. Also we may be asked to assist in the refile of SHARES, Amateur Radio and other MARS group messages. Some will come via VHF for HF REFILE, some may be received via SSB or SCD and need to be refilled into our MDS directly or thru a TRAFFIC REP STATION.

LASTLY: Don't forget that if you are sent to a field station to check in with the CHOP (Chief Operator) there when you arrive, and check out when you leave. Also file any necessary final EEI UPDATES and SITREP messages.

Questions:

1. Who sends an EEI?
2. What frequency is your state MARS ECOM net on?
3. What is the "RULE OF THUMB" for any HAZMAT event?
4. If the event is in your back yard what do you do?

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LESSON FIVE

ART/SAT/SUPPORT TEAMS

(Ref: TOOL KIT, page 3)

(Ref: your State ECOM Operations Guide)

(Ref: your State ECOM Plan)

There are two equal groups, well really three, where NMCM members assist during any event.

1. Auxiliary Radio Team (ART): This is a specialized group made up of 3 or more members who have an established, practiced a team approach to getting a field station "ON THE ROAD" in a short period time, set up and operating for the first shift during an event. They should be able to stay in contact via VHF while traveling, and if possible have mobile HF capability so they can be in touch with their state ECOM net and staff.

Upon arrival they will check in with the Incident Command Center, establish their station and begin operations.

2. Station Augmentation Team (SAT): This is a group of members who will put together additional materials needed for a field station or support a pre-existing station to give relief to the current operators. They are not under the "JUMP AND RUN" pressure of the ART group. A SAT may be put together by the ECOM staff when the field station needs become clear. For pre-existing stations they need to practice in that setting so they are familiar, to the regular operators and with the equipment.

Under pressure IS NOT THE TIME to be meeting people for the first time or learning how an unfamiliar piece of equipment works.

3. SUPPORT: Here is the third important group. These are those members who are not ready to attempt field operations. Their job is to keep their home stations operating, offer NECOS and TRAFFIC REP relief, assume control of alternate nets, assist in handling traffic overload, finding those little things needed to support the field groups that no one else has the time to do. Remember the old RULE OF THUMB that it takes two as support staff to keep one person in the field.

The ART and SAT Captains need to keep an up-to-date roster of all phone numbers and email address list to contact their members, an inventory of the equipment available to each member and lead them in practice drills or exercises.

Questions:

1. Which group is the "MOST IMPORTANT GROUP" for ECOM?
ART / SAT SUPPORT
2. Why do we need to stay in contact while traveling to a site?
3. Who has leadership responsibility for any ART or SAT?

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LESSON SIX BASIC USE OF DIGITAL MODE OPERATIONS

(Ref: Region 10 Digital Procedures Training Guide)
(Ref: TOOL KIT, pages 18, 19, 20, 23)
(Ref: NTP 8 (D) Annex C & H)

All stations should, as much as possible, become "Digital Active" for MT63 which is used on Region 10 nets, also we should have a practiced capability for RTTY and AMTOR, which is used by other Regions in the Pacific Area and many of our partner radio organizations.

For those who do not have MT63 operating you can find FREE SOFTWARE on the internet written by IZ8BLY. This software is virus free, easy to install and operate. There are directions in the help package with it on how to build a "Home Brew" interface between your radio and computer sound card. There are several versions of commercial sound card interface equipment available for use between your radio and sound card or you can just have your computers mic close to the radio speaker and your radio mic near the computer speaker and have perfect copy.

Many members are using MixW software for all three modes. It has a cost to it but it's cheaper than a TNC. Basic MT63 requires no TNC as we are used to having for RTTY, AMTOR, Pactor and Packet. The advantage of MixW is that it requires no TNC and does many Modes of digital communications, including SSTV, PSK31, CW, THROB, HELSCRIBER and FAX (All in one package). The computer most of us have anymore is capable of handling these sound card modes. (Note: NMCM DOES NOT USE PSK OR WINLINK)

Note: If training on the air - Do the following, or go to the PA1E net and ask for assistance.

Now let's try some MT63. I will send a short file to see if you can copy it.
(SEND FILE)

Now I will call this net with MT63 to see who can check in using the mode. Refer to the next page for the correct checkin line to respond with. For those who have misplaced the sheet I'll read it to you quickly.

NNNOXXX NNNNOXXX NNNNOXXX DE NNNNOAAA NNNNOAAA NNNNOAAA ZKE QRU K

DE	means	THIS IS
ZKE	means	I AM CHECKING INTO THE NET
QRU	means	I HAVE NO TRAFFIC
K	means	OVER

Are there any questions?

Lets give it a try and I'll listen for anyone to reply with a checkin

(send net callup line and respond to any who respond sending the net checkin acknowledgment line)

Questions:

1. Where can you find the Region 10 Digital Procedures Training Guide?
2. Where can you find a list of Z and Q SIGNALS and COMMON abbreviations?

Region 10 ECOM Training Guide

LESSON SEVEN DIGITAL OPERATIONS TIPS

(Ref: Region 10 Digital Procedures Training Guide)
(Ref: TOOL KIT, pages 18, 19, 20, 23)

Tips for Digital Operations On Nets

Default for MT63 is 1000 Hz bandwidth, long interleave
Default for RTTY is TX/RX 1500 Hz, 170 shift, 45.5 baud
Default for AMTOR is TX/RX 1500 Hz, 170 shift
All modes are USB.

Some of these commands may be worth putting into your programs,
MACRO defined buttons.

1. THE PRELIMINARY CALL FOR A MARS DIRECTED NET IN MT63, RTTY OR AMTOR

```
NNN0ALS NN0ALS NNN0ALS DE NNN0XXX NNN0XXX NNN0XXX PA1Z PA1Z PA1Z
RYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYRYR
SGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSGSG
OR
NNN0ALS NNN0ALS NNN0ALS DE NNN0XXX NNN0XXX NNN0XXX PA1Z PA1Z PA1Z
NNN0ALS NNN0ALS NNN0ALS DE NNN0XXX NNN0XXX NNN0XXX PA1Z PA1Z PA1Z
NNN0ALS NNN0ALS NNN0ALS DE NNN0XXX NNN0XXX NNN0XXX PA1Z PA1Z PA1Z
```

2. To call a directed net asking for check-ins

```
NNN0ALS DE NNN0XXX ZKA PA1Z ZKB K
(ZKA = I AM NET CONTROL / ZKB = THIS IS A DIRECTED NET)
```

3. To check in (with no traffic)

```
NNN0XXX NNN0XXX NNN0XXX DE NNN0AAA NNN0AAA NNN0AAA ZKE QRU K
(ZKE = CHECKING INTO NET / QRU = I HAVE NO TRAFFIC)
```

To check in (with traffic)

```
NNN0XXX NNN0XXX NNN0XXX DE NNN0AAA NNN0AAA NNN0AAA ZKE ZBO K
(ZBO = I HAVE NO TRAFFIC)
```

4. To acknowledge stations checking in

```
NNN0AAA NNN0BBB NNN0CCC DE NNN0XXX R AR
```

5. If no station is heard on a net call

```
NNN0ALS DE NNN0XXX ZGN AR
(ZGN = NOTHING HEARD)
```

6. To declare a free net

```
NNN0ALS NNN0ALS NNN0ALS DE NNN0XXX NNN0XXX NNN0XXX ZKA PA1Z ZUG ZKB AR
(ZUG ZKB = NEGATIVE FREE NET[THIS IS NOT A FREE NET])
```

7. To request permission to secure a station

```
NNN0XXX NNN0XXX NNN0XXX DE NNN0AAA NNN0AAA NNN0AAA INT ZKJ K
(INT = QUERY [ASK/REQUEST])
(ZKJ1 OR ZKJ 2 = CLOSING DOWN/I AM CLOSING DOWN)
```

To grant permission to secure
NNN0AAA DE NNN0XXX ZKJ AR

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- To request permission to contact another station

NNN0XXX DE NNN0AAA INT QIC NNN0BBB K
(QIC = ESTABLISH COMMS WITH)

To grant permission to contact another station

NNN0AAA DE NNN0XXX QIC NNN0BBB AR

- To secure the net

NNN0ALS NNN0ALS NNN0ALS DE NNN0XXX NNN0XXX NNN0XXX ZKA PA1Z ZKJ2 AR

COMMON Q AND Z SIGNALS

ZKA	I AM NECOS	ZKJ1/ZKJ2	CLOSING DOWN/I AM CLOSING DOWN
ZKB	THIS IS A DIRECTED NET	INT	QUERY (ASK/REQUEST)
ZUG	NEGATIVE	INT QIC	MAY I ESTABLISH COMMS WITH
ZUG ZKB	THIS IS A FREE NET	INT QRZ	WHO IS CALLING
ZKE	CHECKING INTO NET	INT ZKJ	REQUEST PERMISSION TO SECURE
ZBO	I HAVE TRAFFIC	INT ZBD	SEND AGAIN
QRU	I HAVE NO TRAFFIC	ZGN	NOTHING HEARD
QIC	ESTABLISH COMMS WITH	ZUE	AFFIRMATIVE
ZUG	NEGATIVE		

COMMON DIGITAL ABBREVIATIONS

AA	UNKNOWN STATION	K	OVER
AR	OUT	R	ROGER
AS	WAIT	T	RELAY

Activity:

- Volunteer to serve as ALT NECOS and call it as a digital net
Email NNN0AS0 FOUR for credit (nnn0as0-4@navymars.org)

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LESSON EIGHT **EEI MESSAGES HEADER AND TEXT**

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, pages 8, 9, 10, 11)

1. Where to find easy EEI FORMAT aids:

<http://navymars.org/> and select EEI form where you fill in the blanks and an automatic email is sent including one to you to be taken to the MARS data system (MDS).
(currently being beta tested)

Region Ten web site / table of contents / ECOM / software.
An EEI generating program you can run on your computer ready for email and MDS.

2. There are three (3) important parts to an EEI

First is the "Header" where you enter your call and message number, the current Date-Time-Group (DTG), your FM info, and the long list of TO ADDEES: Lets look at an example.

3. EEI Header Example:

```
DE NNN0XXX 001
O 200315Z MAR 2007 (OSCAR NOT ZERO, DDHMMZ MON YEAR)
FM NNN0XXX AK
TO AAN3EEI VA (DOD ADDRESS)
INFO NNN0ASA VA (CHIEF MARS)
NNN0ASZ GA (NATIONAL TWO)
NNN0ASE SCA (PAC AREA DIRECTOR)
NNN0ASE ONE AZ (PAC AREA ONE)
NNN0AS0 OR (REGION 10 DIRECTOR)
NNN0AS0 ONE OR (REGION ONE)
NNN0AS0 TWO OR (REGION TWO)
NNN0GXX ST (STATE DIRECTOR)
NNN0GXX ONE ST (STATE ONE)
NNN0GXX TWO ST (STATE TWO)
BT
```

Now isn't that simple? The only thing to change is adding a ZEN/ directly before (ZEN/NNN0ASA VA) the person you have already sent the EEI message to by other modes. Since we "ALWAYS" send ACTUAL EEI'S via email first, the ZEN/ is added only to the MDS copy.

Questions:

1. If you are one of the ADDEE'S, when do you ZEN yourself?
2. Can you add another states staff to an EEI?

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LESSON NINE

EEI MESSAGES HEADER AND TEXT

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, pages 8, 9, 10, 114)

The second part of an EEI is the TEXT which begins with:

```
UNCLAS ACTUAL INCIDENT (OR EXERCISE)
SUBJ: (REPORT UPDATE NO.__/FINAL)
1. REF: EVENT NAME / STATE
A. DESCRIBE INCIDENT AND LOCATION (WHAT/WHEN/WHERE)
B. STATUS OF EMERGENCY MEDICAL FACILITIES
C. STATUS OF LOCAL TRANSPORTATION
   (ROADS/BRIDGES/AIRPORTS/RAIL)
D. WHAT WAS DAMAGED (BUILDINGS/CARS/FACILITIES/NUMBER
   INJURED)
E. STATUS OF AREA UTILITIES (PHONE/POWER/WATER/GAS)
F. STATUS OF COMMUNICATIONS (TV/RADIO)
G. SOURCE OF INFORMATION (TV/RADIO STATION/AGENCY NAME)
H. REMARKS OR OTHER PERTINENT INFO
ACTUAL INCIDENT (OR EXERCISE)
BT
(OP NOTE IF NEEDED)
NNNN
ZZZZ
```

There, that was easy also.

Activity:

1. Format and send an EEI by email to NNN0AS0 FOUR (nnn0as0-4@navymars.org) for extra credit.

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LESSON TEN

EEI MESSAGES EVENT ID AND NOTES

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, page 8, 9, 10, 11)

This is the third part of an EEI. For this lesson we will look at the EVENT IDENTIFIERS and some notes on sending an EEI.

1. EEI EVENT IDENTIFIER (line 1 of the EEI message)
(partial list/refer to NTP8(D) for a complete list)

AIR CRASH	FALLEN STAR	POWER OUTAGE (MAJOR)	DARK DAY
BIOLOGICAL EVENT	BAD BUG	SEARCH/RESCUE	SECURE HAVEN
BOMBING INCIDENT	LOUD BANG	SHIP WRECK/INCIDENT	DEEP SEA
BRIDGE DAMAGE/LOSS	LOST SUPPORT	SEISMIC SEA WAVE	TSUNAMI
CHEMICAL SPILL	POISONED GROUND	SNOW STORM (MAJOR)	WHITE BLANKET
CIVIL UNREST/RIOT	BAD MAGIC	TORNADO	VIOLENT TWISTER
COMMS LINK DOWN	LOST COMM	TRAIN WRECK/DERAIL	BROKEN TRACK
DAMAGING HAIL	FALLING ICE	VOLCANO	BRAZEN BRIMSTONE
EARTHQUAKE	ROLLING THUNDER	WATERDAM BROKE/DAMAGED	FAST WATER
FLOOD	TALL WATER	TERRORIST THREAT	HIDDEN SHADOW
FOREST FIRE	SCORCHED EARTH	SPECIFIC AGENCY SUPPORT	
GAS LEAK/EXPLOSION	HOT AIR	FEMA	FEDERAL RESPONSE
HURRICANE	HOWLING WIND	JCS	JOINT LIONS
ICE (SEVERE ON HWY)	BLACK ICE	NCS	TOP COVER
INTERSTATE BLOCKED	BLOCKED LANE	NDMS	MEDICAL LINK
NUCLEAR	NUCLEAR GREYSTONE	NG & RESERVE	CIVIL COVER
OIL SPILL (WATER)	DARK WATER	SHARES	COMMON FORTUNE

IF NO IDENTIFIER LISTED USE PLAIN ENGLISH

2. EEI sending notes

When sending via SSB/VOICE, inform the receiving stations if the message has been sent by email. Submit only ACTUAL EVENT EEI messages by email to the following addressees.

TO: eei@dod-mars.org (all lower case)

CC: nnn0asa@navymars.org (all lower case)

If your e-mail can mark the message as urgent, do so.

3. Do NOT submit EXERCISE EEI messages by EMAIL.
4. The E-MAIL subject line should begin with: ACTUAL EEI/CITY (or County) and State where the events took place. Enter the EEI message from the DE...line through the final BT line.
Email forwarding of the EEI message may be done by any station prior to entry into the MDS.
5. Submit the EEI message into the MDS or pass to a MARS station that has MDS capability or the PALE NET by sending the entire EEI message from the O___Z___ (DTG) line through the final ZZZZ line.
6. Do not REPEAT/REPORT RUMORS. Check out any rumors and use reliable known sources for information. Beware, MEDIA reports have been known to be inaccurate.

Activity:

Format and send an EXERCISE EEI via email to NNN0AS0 FOUR for extra credit. (nnn0as0-4@navymars.org).

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LESSON ELEVEN ECOM NET ACTIVATION AND CONTROL

(Ref: NTP8(D) Annex D)

(Ref: Pacific Area Operations Guide, Annex C)

(Ref: your State ECOM Plan)

(Ref: TOOL KIT, pages 12, 15)

ACTIVATION OF EMERGENCY NET

1. Primary frequency for a local ECOM Net will be the local Region/State Traffic Net frequency. If there is a traffic net in progress on the frequency then it should be secured and an ECOM net started in it's place. If there is already an ECOM net on frequency (from another State/Region) then a nearby alternate frequency should be used, advising the other NECOS to direct checkins to that frequency.
2. Upon the activation of any ECOM net, the NECOS of the Pacific Area PA1E net should be notified so they can direct members/traffic to the appropriate net/frequency.
3. It is the responsibility of the Region/State ECOM Assistant to facilitate rotation of NECOS as necessary.
4. The initial message request for emergency communications support will be initiated by the MARS member that activated the ECOM plan and/or is establishing the net.
5. Any member who finds that telephone service has been disrupted is responsible for monitoring the primary state MARS frequency for the duration of the outage and/or emergency.
6. During the emergency:
 - (A) Maintain a listening watch on active circuits.
 - (B) Check in when NECOS opens the net. Do not tune, test or transmit without permission of NECOS.
 - (C) Notify NECOS if you must leave the net.
 - (D) Avoid speculative comments, rumors or statements.
 - (E) Do not disclose information gained from military circuits except as authorized.
 - (F) Accuracy is paramount.
7. Our mission is to send and receive messages. The attainment of Reliability, Speed and Security depends, to a large extent, upon the operator. Be professional and maintain circuit discipline.

Questions:

1. Are there any questions?
2. Where do you find your local State ECOM Net?

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LESSON TWELVE ECOM NET ACTIVATION AND CONTROL

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, pages 12, 15)

Here are some tips on how to call any emergency net as NECOS.

1. Call the ECOM net, keep a log using this net call up script:

```
ALL STATIONS THIS NET THIS IS NNN0XXX NET CONTROL FOR THE
PALE NAVY MARINE CORPS MARS EMERGENCY COMMUNICATIONS NET THIS
IS A DIRECTED NET OVER
```

(Abbreviated call signs are NOT allowed)

2. Respond to any emergency calls stations have.
3. Designate a message handling station to: (via SCD, SSB or email)
 - A. Send emergency messages
 - B. File an implementation message
 - C. File any EEI messages
 - D. File any SITREP messages
4. Remain as NECOS until relieved
5. File closing reports: NET REPORTS/FINAL SITREP REPORT
7. Depending on the type of emergency communications service requested, initial attempts for Region/State ECOM nets shall be on local state traffic net frequencies.

Activity:

1. Call an ECOM net as a practice. Use script above and email to NNN0AS0 FOUR (nnn0aso-4@navymars.org)

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LESSON THIRTEEN ECOM NET ALERT MESSAGES

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, pages 6,7)

ALERT NOTIFICATION

1. In some cases, i.e. hurricane, ice storm warning, an impending Tsunami, forest fires approaching communities, etc.) It is possible to alert Area, Region & State ART members in advance of a pending disaster and the possibility that MARS may be activated. For this purpose an ALERT message may be sent by the State Director, State ECOM Assistant, Region Director or ECOM Assistant to officially place MARS members on an alert status. Members should monitor the designated HF or VHF frequencies to await an official notice of activation (Remember, WE CANNOT SELF ACTIVATE).

2. Conditions and actions to be taken are as follows:

A. COMCON III

Description: An emergency situation is expected within 48 hours.
Action: Alert NMC MARS stations to monitor primary frequency.
Take precautions, test emergency power, locate any essential items, continue normal routines.

B. COMCON II

Description: An emergency situation is anticipated within 24 hrs.
Action: Take measures to activate on short notice.
Curtailed routine.

C. COMCON I

Description: An emergency situation is imminent.
Action: Suspend all normal operations, activate emergency networks as necessary.

D. COMCON 0

Description: An emergency situation exists.
Action required: Identical to COMCON I.

3. The Alert messages will be passed on to the RDN TRAFFIC REPS for distribution on the net (unless nets have been suspended) and repeated until an "Alert Cancellation" message is received.

4. Alert notifications can be in conjunction with, not replace EEI msgs.

Questions:

1. When would an ECOM net be established?
COMCON 0, I, II, III

2. If your assistance is requested, can you change the COMCON level?

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LESSON FOURTEEN ECOM NET ACTIVATION AND CONTROL

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan
(Ref: TOOL KIT, pages 12, 15)

ALERT MESSAGE FORMAT:

O Z MO YEAR (DTG)
FM NNN0XXX XX (STATION INITIATING ACTION) (ST)
TO NNN0GXX XX (STATE DIRECTOR) (ST)
NNN0GXX ONE XX (STATE ASST DIR) (ST)
NNN0GXX TWO XX (STATE ECOM ASSISTANT) (ST)
INFO NNN0ASE SCA
NNN0ASE ONE (ST)
NNN0ASE TWO (ST)
NNN0AS0 OR (REGION DIRECTOR)
NNN0AS0 ONE OR (REGION ASST DIR)
NNN0AS0 TWO OR (REGION ECOM ASSISTANT)
BT
UNCLAS
SUBJ: ALERT NOTIFICATION
1. (SITUATION-CITE ALERTING CONDITION I, II, III)
2. (AREAS AFFECTED)
3. (ANTICIPATED PERIOD OF TIME)
BT
NNNN

Questions:

1. How do you send an ALERT message?
2. Is the Alert COMCON change message read on a traffic net?
3. Draft and email an Alert COMCON message via email to
NNN0AS0 FOUR (nnn0as0-4@navymars.org)

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LESSON FIFTEEN ECOM IMPLEMENTATION MESSAGES

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, page 16)

Upon Implementation of any portion of the ECOM plan by a MARS member. The "Implementation Message" must be sent via the quickest means available and as an MDS message.

The FORMAT is:

```
O      Z YEAR      (DTG)
FM NNN0(CALL) (ST) (station initiating action)
TO NNN0ASA VA
NNN0ASZ GA
NNN0ASE SCA
NNN0ASE ONE AZ
NNN0ASE TWO OR
NNN0AS0 OR          (Region Director)
NNN0AS0 ONE OR      (Region Asst Director)
NNN0AS0 TWO OR      (Region Two)
NNN0GXX XX          (State Director) (ST)
NNN0GXX ONE XX      (State Asst Director) (ST)
NNN0GXX TWP XX      (State Two) (ST)
BT
UNCLAS
SUBJ: EMERG COMM IMPLEMENTATION
1. CIRCUMSTANCES REQUIRING IMPLEMENTATION)
2. MARS SERVICES REQUESTED, YES/NO.
   (IF YES, NAME, TITLE, AGENCY, PHONE)
3. ADDITIONAL COMMUNICATION SUPPORT REQUIRED, YES/NO.
   (IF YES, WHEN AND TO WHAT EXTENT)
A. STATE - ACTION TO BE TAKEN BY STATE DIRECTOR
B. REGION - ACTION TO BE TAKEN BY DIRECTOR
C. OUTSIDE REGION - ACTION TO BE TAKEN BY AREA OR CHIEF, NAVMARCORMARS
BT
NNNN
ZZZZ
```

Note: Although not a requirement, it is a good idea to notify adjacent states They may be of assistance in providing relays.

Questions:

1. Who files an "Implementation Message"?
2. Does an "Implementation Message" replace an EEI or SITREP?
3. Format and send a drill implementation message via email to NNN0AS0 FOUR (nnn0as0-4@navymars.org).

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LESSON SIXTEEN ECOM SITUATION REPORT (SITREP) MESSAGES

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, page 17)

Situation Reports (SITREPS)

Read in NTP8 (D) about the difference between SITREP and EEI messages.

During the emergency, Situation Reports (SITREPS) shall be sent by the on-scene MARS station every six hours or more frequently via MDS.

The last SITREP will be the FINAL SITREP. Each paragraph will contain the appropriate information or one of the following terms:

NO CHANGE - Indicates same as previously reported.
NEGATIVE - Indicates not applicable/being used or nothing to report.
NOT AVAILABLE - Indicates information not available at present.

The SITREP message format is:

P 123456Z MON YEAR (DTG)
FM NNN0XXX XX (STATION INITIATING ACTION) (ST)
TO NNN0GXX XX (STATE DIRECTOR) (ST)
NNN0AS0 OR (REGION DIRECTOR)
NNN0AS0 ONE OR (REGION ASST DIRECTOR)
NNN0ASE SCA (AREA DIRIRECTOR)
NNN0ASE ONE AZ (AREA ASST DIRECTOR)
INFO NNN0GXX TWO XX (STATE TWO) (ST)
NNN0ASE TWO OR
NNN0AS0 TWO OR
BT
UNCLAS
SUBJ: SITREP ONE (OR, TWO, THREE, ETC.)
1. (BRIEF SUMMARY OF SITUATION IN DISASTER AREA)
2. (DESIGNATOR OF ECOM NET AND NUMBER OF STATIONS PARTICIPATING)
3. (BRIEF ADVISORY INFO, RECOMMENDATIONS, NEEDS, ETC.)
4. (PROGNOSIS FOR IMMEDIATE FUTURE)
5. (OTHER PERTINENT INFO: PROBLEMS, EQUIPMENT PERFORMANCE ETC.)
BT
NNNN

Questions:

1. What is the difference between EEI updates and SITREP messages?
2. Format and send a SITREP message via email to NNN0AS0 FOUR (nnn0as0-4@navymars.org).

Region 10 ECOM Training Guide

LESSON SEVENTEEN ECOM MESSAGE HANDLING TIPS

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide Annex C)
(Ref: your State ECOM Plan)
(Ref: Region Ten Web Page / Nets-MBO's)

1. All Ecom messages are to be sent via MDS as well as being forwarded to the PA1E NECOS directly or via relay as soon as possible for use in the PA1E net and in the MT63 BEACON alerts.

2. All MDS ECOM messages are sent as a 'MULTI' message.

3 Mailbox/Switch (MBO)entry notes:

- A. Connect to Mailbox/Switch (MBO)
- B. Send: S? MULTI (see para 5) (ie: SY MULTI)
- C. Send: 1? MULTI (see para 5) (ie: 10 MULTI) (1 OSCAR)
Be certain you use the correct O (OSCAR) or 0 (ZERO)
- D. Send message DE line through final ZZZZ and a CR (carriage return/enter)
- E. When prompted with 'MSG FILED' log off.

4 For an AFLOAT message:

- A. Go to navymars.org web site, select: SEND A MARSGRAM / ON BOARD A SHIP AND FILL OUT THE FORM
-- OR --
- B. Connect to MBO and send: ST NN0MDI (AT) NOASE
- C. Send: 1R USS ABRAHAM LINCOLN (SHIPS NAME)
- D. Send: RR NOASE
DE (ETC)

5 Message Precedence Reference

IMMEDIATE	SY	10	30 MIN - 3 HRS (1 OSCAR)
PRIORITY	SX	1P	18 - 24 HRS
ROUTINE	ST	1R	24 - 48 HRS

6 Sending an ECOM message via a TRAFFIC NET

Check in with:

I LIST ONE (PRECEDENCE) MULTI AND OUTBOUND

Indicating you have a message for multiple addee's in Region 10 and for members outside Region 10.

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The offset shift you use for digital modes (from frequency matrix)

SOUND CARD = For all digital HF modes use -1.5KHZ offset from the assigned/matrix frequency (some software does this for us)

PK-232 TNC = For all digital AFSK HF modes use -2.21KHZ offset from the assigned/matrix frequency (- .71 from window freq)

KANTRONIC TNC = For all digital HF modes set shift = modem,
MARK = 1400, SPACE = 1600, and use -1.5KHZ offset

Note: If working on LSB (ie: Army MARS) digital frequency, reverse the offsets.

Questions:

1. Who receives an OUTBOUND message on a traffic net?
2. What are the frequencies of your MBO?

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LESSON EIGHTEEN FILING SHARES AND OTHER MARS MESSAGES

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, page 17)

1. To file a SHARES message on a MARS nets.

A. Accept the SHARES message as sent to you.
(SAMPLE SHARES MESSAGE AS RECEIVED)

```
R 131628Z MAR 2004
FM JOE BANK FAA TOWN VA 757-887-4494
TO JOHN DOE FBI SHAWNEE KS 800-800-8354
INFO JANE DOE FBI OKLAHOMA CITY OK 800-800-7900
BT
MESSAGE TEXT
ETC.
```

B. Add 'DE' line, ZYJ and state routing Indicators and enter into the MDS

C. SAMPLE MESSAGE AS FORMATTED FOR ENTRY INTO MARS MDS

```
ST MULTI
1R MULTI
DE NNN0ASA 124
R 131628Z MAR 2004 ZYJ
FM JOE BANK FAA TOWN VA 757-887-4494
TO NOGBD/JOHN DOE FBI SHAWNEE KS 800-800-8354
INFO NOGBD/JANE DOE FBI OKLAHOMA CITY OK 800-800-7900
BT
MESSAGE TEXT
ETC.
```

Note: 'ZYJ' is a special 'Z' signal meaning, 'THIS IS A SHARES MESSAGE'

2. Army/Air Force MARS to NMC MARS forward as received except for:

- A. Delete "GROUP COUNT"
- B. Add "UNCLAS"

3. For NMC MARS to Army/Air Force MARS, forward as received, they will alter it as needed for their system.

Questions:

- 1. What do we change to send a NMCM message to a Army MARS station?
- 2. What is a "State Routing Indicator"?
- 3. Where do you find the list of "State Routing Indicators"?

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LESSON NINETEEN FILING AMATEUR MESSAGES INTO MARS

(Ref: NTP8(D) Annex D)
(Ref: Pacific Area Operations Guide, Annex C)
(Ref: your State ECOM Plan)
(Ref: TOOL KIT, page 17)

AMATEUR RADIO TO MARS TRAFFIC REFILE

A. Sample message as received:

```
NR56 ROUTINE W4SSN CK7 NORFOLK VA 2100Z MAR 15
WELDON RYE RMCS USN
OPERATIONS DIV NAVCOMMSTA SAN FRANCISCO
STOCKTON CA 95283 286 262 0670 BT
YOUR MESSAGE RECEIVED X SEE YOU SUNDAY BT HAROLD
```

B. Sample message as formatted for MARS MDS:

```
ST MULTI
1R MULTI
DE NNN0(CALL)(SERIAL #)
R 152100Z MAR 1997
FM NNN0(YR CALL) (ST)
TO RMCS WELDON RYE USN
OPERATIONS DIV NAVCOMMSTA SFRAN
STOCKTON CA 95283
286-262-0670
BT
UNCLAS
1. 56 R W4SSN 7 NORFOLK VA 2100Z MAR 15
2. YOUR MESSAGE RECEIVED X SEE YOU SUNDAY
3. HARLOLD SENDS
BT
NNNN
ZZZZ (CR)
```

C. To reformat a Amateur Radio to MARS message back to Amateur Radio do the following:

Put para 1, in as the "TOP HEADER LINE", put the "TO" lines in as the "TO ADDRESS"

Put para 2, in as the message TEXT, add BT followed by para 3.
Send the message via whatever Amateur Radio channels available.

Do NOT mess with any Amateur Radio handling instructions, change any precedence information or add any punctuation.

Questions:

1. Following the ZZZZ, what does (CR) indicate?
2. Can we send Amateur Radio messages to a Canadian or South American address?
3. Do we need to know what all the "Header Line Stuff" in an ARRL message is?

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LESSON TWENTY NCMC AND NIMS/ICS/NRP INFO

(Ref: TOOL KIT, page 25)

MARS AND THE INCIDENT COMMAND SYSTEM (ICS) NIMS/NRP

1. All 3 MARS services have decided to make a change in the requirements for holding a DOD ID Card with Field Certification.
2. Completion of FEMA on-line courses IS-100, IS-200, IS-700 and IS-800, plus being identified as deployable to support one or more disaster support agencies. The 3 MARS Chiefs will notify supported agencies the holders have met above requirements and are allowed into Disaster Areas to provide communication support. For the new card, complete the above courses and return your course certificates and current card to the State Director.
3. All DHS, ARES and emergency support agency units will operate under the INCIDENT COMMAND SYSTEM (ICS). They have set designations for structure where their management Commands and Approves the Incident Action Plan and Resources:(briefly)

OPERATIONS: uses the resources

PLANNING: tracks these resources

LOGISTICS: obtains more resources

FINANCE: pays for these resources

We fit into the LOGISTICS SECTION where the Incident Communications Manager is responsible to receive and transmit messages. Our position is to relay traffic between their message center and our MDS system. Each situation is going to be different. Plan ahead with your 'CUSTOMER' agency to fit into their plan.

FEMA offers the free online courses at:

<http://training.fema.gov/EMIWeb/IS/crslist.asp>

4. Be careful that we do not commit to support what we won't be able to fulfill. Each member needs to evaluate their responsibilities and establish clear understandings of what can be expected by their superiors for each part of their "Emergency Service Commitments".
5. Response happens on Field Local, Regional and National Levels
6. Here is a list of acronyms you will need to know:

NIMS - NATIONAL INCIDENT MANAGEMENT SYSTEM

NRP - NATIONAL RESPONSE PLAN

DHS - DEPT OF HOMELAND SECURITY

ICS - INCIDENT COMMAND SYSTEM

ICP - INCIDENT COMMAND POST

EOC - EMERGENCY OPERATIONS CENTER

IAC - INCIDENT ADVISORY COUNCIL

JFO - JOINT FILED OFFICE

JOC - JOINT OPERATIONS CENTER

FCO - FEDERAL COORDINATING OFFICER

ESF - EMERGENCY SUPPORT FUNCTION

NOC - NATIONAL OPERATIONS CENTER

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Questions:

1. If you are not going to commit to field operations do you still need to complete the NIMS course work?
2. Is ICS in effect when just one Police Officer makes a traffic stop?
3. What happens when there are multiple agencies involved in an Incident?

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LESSON TWENTY ONE USE OF OTHER DIGITAL MODES

(Ref: NTP8(D)

(Ref: Region 10 Totem Pole Fall 2006-Winter
2007 page 31)

Many members have access to a TNC to use between their computer and radio so they can operate Packet, Pactor, AMTOR AND RTTY.

Several of our 'Partner' agencies use AMTOR and RTTY for message sending so we should be ready and capable to work those modes.

In the Fall 2006-Winter 2007 TOTEMPOLE, on page 31, NNN0KUL has an excellent article on the various software available to use.

For assistance getting your station operating in these modes ask, NNN0AS0 SIX or check into the Region/State Digital Training Nets.

The important part is that we need to be capable, "All Mode Operators" so we can be of MAXIMUM support to those in need.

Most of the common TEXT LINES used in all digital modes was discussed in LESSON SEVEN. Lets go back for a quick review.

For details to set up your digital station refer to National NMCM web page, Training, Contents, Digital Modes.

Questions:

1. Do you have any questions about the use of any of these digital modes?
2. Are the same TEXT LINES used for all modes?
3. Report your digital capability, MT63, AMTOR, Pactor, RTTY and Packet with an email to NNN0AS0 FOUR (nnn0as0-4@navymars.org).

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LESSON TWENTY TWO PUTTING IT ALL TOGETHER

(Ref: NTP8(D))
(Ref: Pacific Area ECOM Operations Gu
(Ref: your State ECOM Operation Plan)
(Ref: TOOL KIT)

During the course of these Twenty One Lessons, we have covered all the aspects of Emergency Communications needed to be a skilled, competent, confident operator. We have covered:

Personal preparations for emergencies.
The contents of your area tool kit.
Items to include in a portable radio station.
What to do when "it" happens.
Our ART/SAT/Support teams and how you fit in.
Some basic digital operations, Q & Z signals, sample text lines.
The parts of an EEI message, how to format and send one.
How and where to call and manage an ECOM net.
What the "Alert Message" is plus how and who sends it.
Filing an "Implementation Message".
Sending SITREPS.
Tips on message handling.
How to file messages from SHARES, other MARS services and ARRL.
Where we fit into the Incident Command System (ICS).
FEMA courses available to members.
Getting digital active.

All that remains is to remind you that this information is of NO value if you do not keep it fresh and up-to-date.

ECOM is an ever changing issue and all your input has real meaning.

Are there any questions or thoughts you want to ask or contribute?

Putting it all together is what NNN0DOG has done in the following story. Read through it, apply these concepts to your situation, but also look for where there are missing parts of the ECOM Plan.

Send a personal review of the story and how it applies to you, including left out portions of the ECOM plan to NNN0AS0 FOUR (nnn0as0-4@navymars.org).

DON'T FORGET TO TAKE THE FINAL TEST IN LESSON TWENTY THREE.

It was a dark and stormy night !

THE STORY OF A DISASTER
By NNN0ASE TWO

IT WAS A DARK AND STORMY NIGHT for Duke/NNN0DOG who had enjoyed a picnic in his backyard after just that afternoon notifying his State Director, Ecom assistant and ART Captain that he had acquired a new portable generator for his station. His local Red Cross office called to ask if he was available to assist with shelter communications if predicted high winds developed.

He said he probably could but needed authorization from his superiors. He then called his ART Captain informing him of the request. This was the fastest way available for him to notify his chain of command. He also wrote and emailed an EEI listing the facts and an Implementation message waiting an hour for the evening traffic net so the Traffic Rep could post them in the Mars Data System.

When word of this reached the State Ecom assistant, who upon pre-done instructions of the State Director sent out a COMCON alert message per the State Ecom Plan and following the local MOU with the Red Cross, instructed Duke's ART Captain to activate his ART Team via their phone tree. Each member grabbed their 72 hr kit and radio station suitcase and headed out for the Shelter keeping in touch with each other on the MARS 2 meter repeater frequency. Upon arriving they checked in with the Shelter manager, established their station, checked into the State Ecom net and began operations.

Meanwhile the State Ecom Assistant called one of the other ART Captains asking him to open a State ecom net on their daily traffic net frequency and notified the NECOS of the PA1E net so they could forward stations checking in there to the State net.

While Duke was working at the ART station later that evening winds did reach hurricane levels causing much damage in the region so D issued several SITREP updates. With the outlook being for continued operations the State Ecom assistant recruited shift change operators for the ART station to relieve the current crew as well as adding some improved equipment to facilitate extended operations.

Three days later when events resolved somewhat, regular communications came back on line, the ART station was closed and they checked out with the Shelter Manager. After COMCON conditions were canceled, the State Ecom net was closed, a final SITREP was composed by the State Direct and sent to the Region Director. Duke's ART Captain monitored the return of all staff on their trip home, after action notes were compiled for future improvements and the DARK AND STORMY NIGHT came to a tired but satisfying end.

LESSON TWENTY THREE FINAL EXAM OPEN BOOK

1. Which document is your PRIMARY guide for ECOM operations?

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2. What is the expiration date on your MARS ID tag?
3. Name five (5) items to include in your radio station jump kit?
4. What two (2) things do you do first to prepare for an emergency?
5. Which group is the most important group for MARS ECOM?
6. Define: ZKE and QRU
7. Define: INT ZKJ K
8. What NMCM MARS staff position does NNN0ASZ hold?
9. Where do you put an "OP NOTE" in an EEI?
10. Do you submit EEI messages via email for an exercise?
11. Who establishes a MARS ECOM net?
12. What is the primary frequency used for your ECOM net?
13. As NECOS on a NMCM MARS ECOM net, can you declare it a FREE net?
14. Who can change the state ALERT level?
15. Are alert COMCON level messages read on a traffic net?
16. What causes an "Implementation Message" to be sent?
17. What is SITREP reporting?
18. Do you use a 0 (zero) or a O (oscar) for precedence on an EEI?
19. Define ZYJ?
20. How do you send an Amateur Radio welfare message to Canada?

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21. Who is in charge in the Incident Command System (ICS)?
22. Why do we need to be capable, with RTTY or AMTOR?
23. What action is missing in the "Dark and Stormy Night" story?
24. Which MARS documents would you take with you for field operations?
25. Who sends an EEI?

*** * * * * SEND YOUR ANSWERS TO NNNOASO FOUR * * * * ***

nnn0as0-4@navymars.org