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NCS MANUAL 3-3-1

# TELECOMMUNICATIONS OPERATIONS

# SHARED RESOURCES (SHARES) HIGH FREQUENCY (HF) RADIO PROGRAM USER MANUAL


NATIONAL COMMUNICATIONS SYSTEM
WASHINGTON, D.C.

(THIS MANUAL SUPERSEDES NCSM 3-3-1, DATED JUNE 27, 1991)

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NATIONAL COMMUNICATIONS SYSTEM
Washington, D.C.

NCSM 3-3-1

# TELECOMMUNICATIONS OPERATIONS

## Shared Resources (SHARES) High Frequency (HF) Radio Program User Manual

## CHAPTER 1: PROGRAM DEFINITION AND OVERVIEW

1.1 Purpose. This manual provides instructions to Federal users and establishes standard high frequency (HF) radio operating procedures for the Shared Resources (SHARES) HF Radio Program.

1.2 Applicability. This manual is binding upon the National Communications System (NCS) and other Executive entities who voluntarily elect to participate in the SHARES HF Radio Program. This manual will be used in conjunction with NCS Handbook 3-3-1, AShared Resources (SHARES) High Frequency (HF) Radio Program Directory,@ current edition.

1.3 Authority. This manual is issued under the authority of NCS Directive 3-3, AShared Resources (SHARES) High Frequency (HF) Radio Program,@ September 30, 1988.

1.4 References.

a. Executive Order No. 12472, AAssignment of National Security and Emergency Preparedness Telecommunications Functions,@ April 3, 1984; 49 Federal Register 13471 (1984).

b. National Telecommunications & Information Administration (NTIA), AManual of Regulations and Procedures for Federal Radio Frequency Management,@ May 1992, or current edition.

c. NCS Directive 3-3, AShared Resources (SHARES) High Frequency (HF) Radio Program,@ September 30, 1988.

d. NCS Handbook 3-3-1, AShared Resources (SHARES) High Frequency (HF) Radio Program Directory,@ current edition.

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-Office of Primary Responsibility: OMNCS
-Distribution: NCS

e. National Communications System, "A Concept of Operations for a Shared Resources High Frequency Network (SHARES)," undated.

1.5 General.

a. Background. Executive Order 12472 establishes national policy guidance in support of National Security and Emergency Preparedness (NS/EP) objectives. This guidance mandates that action be taken to "...ensure that a national telecommunications infrastructure is developed... ." Consistent with the Executive Order, functionally similar government telecommunications networks should be designed to interchange traffic in support of national leadership requirements. The NCS is responsible for implementation. A segment of this effort addresses the sharing of federally controlled HF radio resources to establish a robust national emergency HF communications infrastructure. Thus evolved the SHARES (derived from SHAred RESources) HF Radio Program.

b. Objectives. Objectives of the SHARES High Frequency Radio Program are to:

(1) Provide participating agencies with extended high frequency coverage and enhanced emergency high frequency radio communications at no added cost.

(2) Provide an enduring backup to vulnerable leased telecommunications.

(3) Provide the flagword SHARES to expedite identification and processing of emergency Federal government traffic.

(4) Standardize message preparation and procedures to simplify interagency handling of NS/EP traffic.

(5) Provide possible work-around to jamming by permitting interagency operation on allocated frequencies identified for SHARES use.

c. Concept of Operations. The document entitled "A Concept of Operations for a Shared Resources High Frequency Network (SHARES)" (Appendix A), approved by the NCS Committee of Principals, sets forth in detail the mission, operational concept, responsibilities of Federal entities, and the sanctioning process for SHARES. It also defines the criteria for frequency selection and coordination which is the most critical factor in establishing the SHARES HF radio capability. The Concept of Operations subscribes to the following tenets:

(1) Any participating Federal entity will accept, to the extent that acceptance does not interfere with the mission responsibilities of the entity, emergency messages of other Federal entities, or other components of the same entity, for transmission by HF radio to the addressee or to another participant for relay to the addressee.

(2) A SHARES message is an emergency message sent via the SHARES network. It consists of information that must be communicated to a Federal entity and is of critical importance to the Federal government, the entity=s mission, and/or involves the preservation of life and the protection of property.

(3) SHARES messages will be transmitted as unclassified information using clear voice or data in any compatible mode. Encrypted traffic is authorized to be passed over SHARES.

(4) Transmission of SHARES messages will be guided by the policy of the agency accepting the message. Advice that a SHARES MESSAGE is to be transmitted will serve to notify operating personnel that a critical NS/EP message requirement exists, and implicitly, that normal communication paths are not available.

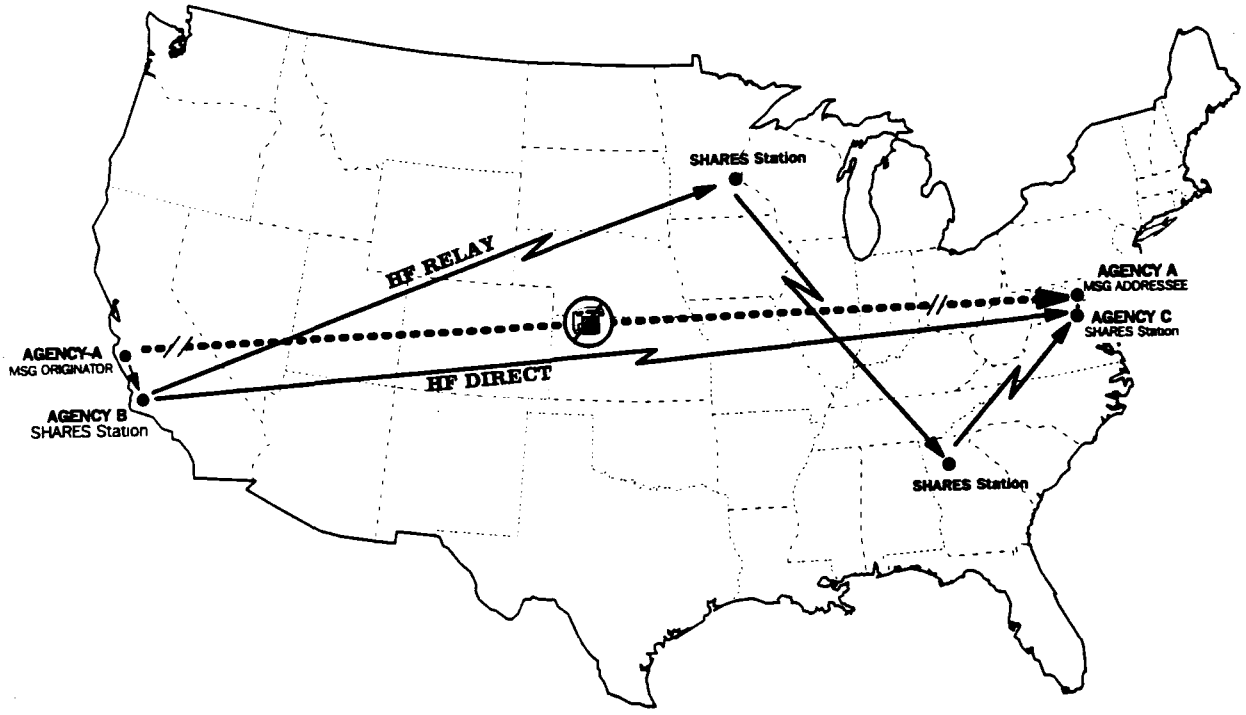
(5) The participants in the SHARES network are Federal departments and agencies, both military and non-military, and include the assets of federally controlled entities. Further, potential participants may include amateur radio operators with access to Federal HF radio equipment and who are authorized by a Federal department or agency.

(6) A directory of federally controlled HF radio station capabilities shall be compiled with appropriate guidelines for use in the SHARES program. Publication and maintenance of a SHARES HF Radio Program Directory are the responsibility of the Office of the Manager, National Communications System (OMNCS).

d. Network Description. Most Federal departments and agencies which comprise the NCS and the Military Affiliate Radio Systems (MARS) operate numerous emergency intra-agency HF networks and point-to-point radio links in support of their individual missions and mission tasking. SHARES provides the capability to operate in interagency network configurations to establish a robust national communications infrastructure in support of national leadership requirements. Interagency network connectivity significantly enhances the emergency HF capability of each Federal participant. A radio network is commonly perceived as having identified subscribers, assigned frequencies, network structure, and discipline. Although SHARES does not exist as an established network, it does satisfy many of the criteria for a network. More importantly, SHARES provides standardized operating procedures and a structured environment for interagency communications where none existed before. Figure 1-1 depicts the SHARES concept functionally in the case where Agencies B and C are sharing their HF resources to pass a SHARES message coast to coast for Agency A. A SHARES message may be relayed through one or more SHARES participating entities to reach the addressee. The addressee may be part of the same Federal entity as the originator or another Federal entity.

e. Participation in the SHARES Program. Participation in the SHARES program is open to all Federal departments and agencies, and federally affiliated organizations who

voluntarily elect to participate in SHARES program activities. Federally affiliated organizations are organizations who have established through formal agreement (*e.g.*, Memorandum of Agreement, Memorandum of Understanding, etc.), procedures for supporting the NS/EP requirements of a Federal SHARES participant, or who have a requirement to interoperate with a Federal department or agency in order to meet mutual NS/EP requirements. For the purposes of this manual, Federal departments and agencies may include their properly sponsored affiliates. Many Federal organizations do not possess HF resources, and rely upon NCS programs like SHARES to provide back-up emergency communications. These organizations are authorized to receive the SHARES HF Radio Program Workbook, to participate in SHARES program activities, and to use SHARES to support NS/EP.




**SHARES CONCEPT**
Figure 1-1

f. Federal Standard 1045 (FS 1045) was adopted in January 1990 to standardize the process of Automatic Link Establishment (ALE) for automated HF radio control. This standard allows radios to initiate contact with a similarly equipped radio using the best possible frequency, establish a communications link, and either send data traffic or allow SSB voice calls. As more and more SHARES members move toward ALE operations, problems of interoperability between radio systems are likely to occur. Because of this potential impact on interoperability of

HF radio systems between SHARES member organizations, a portion of each SHARES exercise is devoted to ALE operations. Additionally, the SHARES HF Interoperability Working Group began registering the ALE address codes used by SHARES members in 1991. The address codes, consisting of up to 15 alphanumeric characters, exclude certain emergency words, networking calls, and approved voice call signs. SHARES members may register their ALE address codes using the SHARES ALE Address Code Registration Form contained in Appendix F.

1.6 How to Use This Manual. This User Manual promulgates official implementation guidance and provides essential information for management, administrative, and radio operator personnel who are users of the SHARES HF Radio Program.

a. User instructions are contained in Chapter 2. These instructions are consistent with national policy and the NCS approved SHARES HF Radio Program Concept of Operations.

b. Operating procedures contained in Chapter 3 have been developed, demonstrated, and validated through a series of interagency HF tests. Training procedures outlined in Chapter 4 are provided to assist participating Federal departments, agencies, and radio stations in establishing in-house training programs and in achieving an operational readiness posture. Procedural information most frequently used by radio operators is provided in quick reference format in Appendix B.

c. Federal HF radio stations supporting the SHARES HF Radio Program have been identified by Federal departments and agencies, and the military services. The cornerstone in the SHARES Concept of Operations is that any participating Federal station may call any other participating Federal station on the latter=s assigned HF operating frequency to pass (or relay) a SHARES message. The frequencies, call signs, and other information for participating stations are listed in the SHARES HF Radio Program Directory which is updated, published, and distributed separately.

d. This User Manual applies only to the handling of messages bearing the flagword SHARES. SHARES messages are used strictly for emergency purposes and are relayed via the SHARES HF radio capability when normal communications media are not reasonably available.

e. Management personnel involved with emergency communications should be familiar with the program outlined in Chapter 1 and user responsibilities outlined in para 2.7 and 4.2. Personnel authorized to release messages should be aware of the SHARES capability, how and when to use the flagword, and how to access the network (para 3.3). Personnel working or occupying the areas in and around telephones with numbers listed in the SHARES HF Directory should be aware of SHARES capability and be instructed to transfer incoming SHARES calls to a radio operator on duty or on call. The SHARES Directory provides information about SHARES HF network subscriber stations. Entries for stations listed in the directory include the station=s location (city and state), call sign, frequencies, telephone numbers, agency affiliation,

and station capability. All personnel who normally operate HF radios during emergencies should be trained in accordance with procedures outlined in Chapter 4.

1.7 Policy. Policy pertaining to the use of the SHARES HF Radio Program is established by NCS Directive 3-3, AShared Resources (SHARES) High Frequency (HF) Radio Program,@ September 30, 1988.

1.8 Responsibilities.

a. NCS entities participating in the SHARES HF Radio Program will, to the maximum extent possible:

(1) Identify HF stations under their control for participation in the SHARES Program.

(2) Maintain the operational readiness of their SHARES HF stations.

(3) Provide updated information as necessary for inclusion in a SHARES HF Radio Program Directory. Use of Federal frequencies for SHARES traffic shall be in accordance with National Telecommunications and Information Administration AManual of Regulations and Procedures for Federal Radio Frequency Management.@

(4) Ensure participation of available stations in SHARES exercises.

(5) Provide representation, as required, at meetings, briefings, conferences, and other official SHARES HF Radio Program activities.

b. The Manager, NCS, will administer the SHARES HF Radio Program and perform the management functions defined below:

(1) Publish and periodically update, as NCS issuances, a User Manual, giving detailed procedures for using SHARES HF Radio Program capabilities, and a Directory of participating federally controlled HF radio stations.

(2) Develop, schedule, and administer periodic exercises of the SHARES HF Radio Program capabilities.

(3) Perform other functions, as necessary, to improve the SHARES capabilities.

c. The SHARES HF Interoperability Working Group will meet the following objectives as set forth in Appendix C:

(1) Implement the SHARES Concept of Operations.

(2) Refine SHARES plans and procedures.

(3) Maintain SHARES readiness through exercises.

(4) Foster interoperability through examination of regulatory, procedural, and technical issues, and make recommendations as appropriate to the NCS Council of Representatives.

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# CHAPTER 2: USER INSTRUCTIONS

2.1 General. The administrative aspects of SHARES network participation, such as internal SHARES message priority, security, and logistics, involve certain user responsibilities. This section discusses the SHARES network in relation to these administrative areas, and defines Federal user responsibilities for maintaining SHARES operations.

2.2 Network Participation. This manual is binding upon NCS and other Executive entities who voluntarily elect to participate in the SHARES HF Radio Program. Each Federal entity identifies, by station location, the call sign, frequencies, and other information to be listed in the SHARES HF Radio Program Directory as network subscribers. To allow for additions and deletions to the list, and changes in perishable information (telephone numbers, times of operation, etc.), the Directory will be updated periodically to maintain current SHARES network subscriber lists. The listed stations will handle (transmit, relay, and receive) SHARES message traffic on a voluntary, non-interfering basis. Use of Federal frequencies for SHARES traffic shall be in accordance with National Telecommunications and Information Administration (NTIA) AManual of Regulations and Procedures for Federal Radio Frequency Management.@

2.3 SHARES Message Priority. A Federal NS/EP message bearing the flagword SHARES consists of information that must be communicated to a Federal entity and is of critical importance to the Federal government, the entity=s mission, and/or involves the preservation of life and the protection of property. Since the handling of SHARES message traffic is voluntary and on a non-interfering basis, SHARES messages are not assigned precedence. The priority for handling SHARES traffic, in relation to any other mission essential or emergency traffic, is to be established by each Federal user.

2.4 Security. It should be recognized that the SHARES HF capability is an emergency communications network. Because of the number of network subscribers, and equipment incompatibilities, SHARES does not lend itself to the application of security measures on a network-wide basis. However, there are certain options available to provide communications protection for SHARES messages. These are outlined in the following sections.

a. Operations Security (OPSEC). Federal users should be aware that SHARES HF transmissions can be intercepted at great distances. It may be assumed that these transmissions may be targets of exploitation by hostile or criminal elements during emergency conditions. Although no classified information is to be transmitted as SHARES messages without being encrypted, some unclassified information may be very sensitive in terms of content and perish-ability. The frequency agility afforded by the SHARES interagency network that provides a degree of anti-jam protection also provides some degree of operational security.

b. Communications Security (COMSEC). The SHARES network presents difficult protection problems. Most existing HF facilities planned to be used in SHARES do not have common COMSEC equipment or keys. For this reason, and within the no-cost constraints for SHARES implementation, new network-wide COMSEC requirements are not established for SHARES. Some Federal agencies have secure intra-agency HF communications capabilities. Some Federal networks have on-line or off-line COMSEC equipment compatible with one or more other intra-agency networks. Federal users with compatible HF COMSEC equipment are encouraged to explore possibilities for sharing common keys and for achieving COMSEC commonality with other agencies in future procurements.

c. SHARES Message Classification. SHARES messages will be transmitted as unclassified information using voice or teletype in any compatible mode. Classified messages will be accepted only when the SHARES station can encrypt the text for transmission or when the originator has encrypted the text off-line.

d. SHARES Message Authentication. Because of the no-cost constraints for SHARES, no common authentication system will be developed for SHARES users. Users are encouraged to use existing intra-agency authentication systems to validate SHARES messages at the receiving end.

2.5 Logistics. Critical logistics considerations which relate to SHARES include procedures for distributing this User Manual and SHARES HF Directory, for maintaining the directory, and for operational readiness training. The planned logistical support to be provided under the direction of the OMNCS is as follows:

a. SHARES User Manual and HF Directory Management. This SHARES User Manual and SHARES HF Directory are available as NCS issuances for distribution to Federal SHARES participants. Participants should identify their requirements and establish their own internal distribution process.

b. SHARES Directory Classification and Maintenance. The SHARES HF Directory is classified in accordance with the data volunteered by Federal agencies and departments participating in the Program. The Directory is published in accordance with security guidelines set forth by NTIA and specific classification instructions stated by individual Federal agencies. Further, the Directory is published with the marking FOR OFFICIAL USE ONLY. The SHARES Directory will be updated based on changes provided by Federal departments and agencies. The SHARES Station Data Form is used to add or delete a SHARES station, or to update information on a SHARES station listed in the SHARES Directory. Instructions for completing the data form are shown on the back of the form. Completed data forms are to be forwarded to the SHARES Project Office through the entity=s SHARES HF Interoperability Working Group member. A copy of the SHARES Station Data Form is shown in Appendix E.

c. SHARES HF Radio Program Workbook. The SHARES Workbook is a three-ring binder containing all the documents that support the SHARES program (NCSD 3-3, NCSM 3-3-1, NCSH 3-3-1), and other material necessary to participate in SHARES program events. The Workbook provides a means for consolidating, distributing, and maintaining SHARES documentation. The Workbook is distributed to all HF radio stations participating in the SHARES program as well as to Federal emergency planning and response personnel. Workbook distribution is controlled by the SHARES Working Group and SHARES Project Office. Reproduction or distribution of NCSH 3-3-1, contained in the Workbook, is prohibited without prior approval of the SHARES Project Office.

d. Operational Readiness Training. Each participating Federal agency and radio station should establish an in-house training program which generally follows the training procedures outlined in Chapter 4. In addition, agencies and stations should be prepared to participate in national SHARES operational readiness exercises conducted by the NCS. The purpose of SHARES exercises is to provide training for station personnel on SHARES radio operating and message formatting procedures, and to expand SHARES awareness within the Federal emergency planning and response community.

2.6 SHARES Operations.

a. SHARES Use. SHARES is always available for use by a SHARES participant to meet individual or interagency mission requirements so long as the tenets contained in para 1.5c above are met. Use of the flagword ASHARES@ at the beginning of all SHARES messages serves to notify SHARES participants that the message meets the tenets established for SHARES use. A SHARES entity that uses SHARES to support its mission during an emergency situation should notify the SHARES Project Office as soon as the situation permits. Notification is made to the SHARES Project Office through the participating station=s SHARES HF Interoperability Working Group representative.

b. SHARES Emergency Readiness Notice. The majority of participating SHARES HF radio stations operate on an as-needed or standby basis. The SHARES Emergency Readiness Notice serves as a means to increase the number of stations Aon-the-air@ and available to support a particular emergency operation. The Emergency Readiness Notice alerts participating SHARES stations to the fact that an emergency situation exists for one or more Federal entities, and that requests for assistance in processing SHARES messages may be expected. The SHARES Emergency Readiness Notice also provides station personnel time to evaluate to what extent, if any, their station could participate in SHARES, and to reset station frequencies to those published in the SHARES HF Radio Program Directory. The Emergency Readiness Notice is prepared by the SHARES Emergency Coordination Team (SECT) and distributed to SHARES HF radio stations through the station=s SHARES HF Interoperability Working Group representative. The preformatted SHARES Emergency Readiness Notice is shown in Appendix D.

c. SHARES Emergency Coordination Team (SECT). The purpose of the SECT is to coordinate SHARES events during emergency situations. The SECT is formed only in the event a SHARES Emergency Readiness Notice is issued, and is composed of SHARES HF Interoperability Working Group members who voluntarily elect to participate. SECT activities include maintaining SHARES Emergency Readiness Notice dissemination status, keeping emergency response personnel informed of the status of SHARES capabilities, resolving any problems concerning SHARES which may arise during the operational event, monitoring SHARES Coordinating Frequencies, and issuing follow-on SHARES Emergency Readiness Notices as required.

d. SHARES Coordinating Frequencies. Up to four SHARES Coordinating Frequencies will be used to support each SHARES operational event. The frequencies will be obtained from the Department of Defense (DoD) pool of authorized frequencies at the beginning of each activity. Frequency selection will depend upon propagation conditions and operational requirements of the event. Notification of the frequencies selected will be made through the SHARES Emergency Readiness Notice. Every effort will be made to obtain from DoD the same frequencies for each event. The frequencies shall be used only for coordinating SHARES events. They are not to be used to pass SHARES message traffic.

e. SHARES Coordination Concept. The voluntary nature of SHARES makes it difficult for the SHARES Emergency Coordination Team (SECT) and participating SHARES stations to determine which stations are on-the-air and available to support SHARES during an emergency situation. The SHARES Coordination Concept provides the SECT and other SHARES stations the capability to identify which stations are available to provide SHARES support. Under this concept, each SHARES station which elects to support SHARES during an emergency situation submits a SHARES availability report to any one of the SHARES Coordination Stations (SCSs) as soon as possible after the emergency begins. The report shall include the station call sign and time the station became available to support SHARES. Only one report is submitted. Follow-on reports or information on the extent or period of station availability are not required. Reports received by the SCSs are forwarded to the SECT. Upon receipt by the SECT, the information is compiled and provided to emergency planning and response personnel, the users of SHARES, and to other SHARES stations to improve the efficiency of SHARES capability. The SHARES stations currently identified to serve as SHARES Coordination Stations are listed in NCSH 3-3-1, SHARES Directory, Chapter 1.

f. Station Participation. Stations participating in a SHARES operational event are requested to provide a copy of the SHARES Events Log(s), and submitter=s name and phone number to the SHARES Project Office as soon after the event as possible. The address of the SHARES Project Office is:

National Communications System
SHARES Project Office, NC-EP
701 South Courthouse Road
Arlington, VA 22204-2198

This information will be used by the SHARES HF Interoperability Working Group to assess the level of SHARES activity during the operation, and to provide a basis for acknowledging station participation.

2.7 SHARES User Responsibilities. Participation in SHARES requires that each Federal agency, department or radio station attend to certain administrative details to effect a SHARES capability in support of national leadership requirements and to enhance a Federal entity=s own emergency HF capability. Areas of responsibility were discussed in the preceding sections. Other user responsibilities include:

a. Providing information to update the SHARES HF Directory.

b. Establishing internal priorities for handling SHARES message traffic on a non-interfering basis relative to other mission critical message traffic.

c. Applying OPSEC, COMSEC and authentication systems to SHARES message traffic to protect sensitive information for whatever purpose any participating agency deems necessary in support of their assigned missions.

d. Providing internal distribution of the SHARES User Manual and SHARES HF Directory, and assuring that at least one copy of each is available at each participating radio station.

e. Providing operational readiness training, including management, administrative, and radio operator personnel.

f. Participating in readiness exercises.

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# CHAPTER 3: OPERATING PROCEDURES

## 3.1 General.

a. This chapter contains essential procedural information that managers (including message originators), administrative personnel (security and logistics), and communications personnel (supervisors and radio operators) need to know to use the SHARES HF capability for emergency interagency communications. These procedures have been developed through the process of testing and have incorporated the recommendations from radio operators who have used these procedures for handling SHARES test message traffic. These procedures are consistent with standard radio operating procedures and are simplified for better understanding and ease of use by personnel with widely varying communications experience and radio operator skills.

b. Paragraphs 3.2 and 3.3 are written for management personnel authorized to release emergency HF traffic. These two paragraphs cover how to originate and format a SHARES HF Radio Program message and how to access the SHARES network. Paragraphs 3.4 and 3.5 cover HF operating procedures developed in support of the SHARES program.

c. Appendix B contains quick reference material which radio operators may use as procedural aids for passing SHARES messages. Additional information on how to use the SHARES HF Directory is provided in the front of the Directory.

## 3.2 Message Origination.

Management personnel authorized to release message traffic should be familiar with the SHARES HF capability, how to format a message, and how to access the network. For message originators, the essential parts of a message are the Aheading@ and the Atext@. The heading consists of the FROM and TO lines with the person=s name, abbreviated agency name, city, state, and phone number of the originator and addressee, respectively. The message text is framed by MESSAGE FOLLOWS and END OF MESSAGE.

*EXAMPLE*

FROM JOHN DOE FAA BURLINGTON MA (617) 555-2525
TO CHARLIE BROWN FHWA ST LOUIS MO (314) 555-1212

MESSAGE FOLLOWS
1 THIS IS A SHARES (EXERCISE) MESSAGE.
2 PLEASE ADVISE STATUS OF REQUESTED EMERGENCY GENERATOR.

END OF MESSAGE

The radio operator at the originating station will add a Date-Time-Group (DTG) and a paragraph count (for voice messages) prior to transmission.

3.3 Accessing the SHARES HF Network.

a. The SHARES network concept assumes that message originators and addressees will have local area access (direct, hand-carry, telephone, line-of-sight radio, etc.) to (or from) one or more participating SHARES stations when normal long-haul circuits are disrupted or destroyed. Before attempting to pass emergency traffic via SHARES, message originators should first determine that conditions and contents of the message satisfy SHARES message criteria as specified in Chapter 1.

b. Having selected SHARES and assigned the flagword SHARES to the message, originators should refer to the SHARES Directory and contact a local participating station to inject the message. After making contact with the radio station, advise the operator that you have a SHARES message and request assistance in transmitting the message. If the station is unable to assist in transmitting the message, refer again to the SHARES HF Directory and select another station.

c. Amateur radio provides a means to augment SHARES during actual emergencies and sanctioned exercises. While the primary means of handling SHARES messages should be among Federal stations, consideration may be given to the use of amateur radio operators (using their facilities) for this purpose. SHARES message originators and radio operators may contact amateur radio operators by local means and request assistance in passing SHARES traffic. Further, SHARES radio operators holding valid amateur radio licenses may contact amateur radio operators in the amateur radio frequency band and request assistance in radio relay of SHARES traffic. Upon establishing contact by local means or HF radio, message originators or radio operators should say: I HAVE EMERGENCY (or EXERCISE EMERGENCY) GOVERNMENT TRAFFIC FOR (city/ state). CAN YOU ASSIST ME IN RADIO RELAY TO THE (city/state) AREA? The first paragraph of any SHARES message shall be THIS IS A SHARES (EXERCISE) MESSAGE.

d. Message originators may assign special handling instructions to limit transmission of sensitive message text to primary Federal frequencies only.

*EXAMPLE*

THIS IS A SHARES (EXERCISE) MESSAGE FOR
TRANSMISSION ON FEDERAL FREQUENCIES ONLY.

After completing this procedure for establishing contact, the normal procedures for transmitting SHARES traffic apply.

e. Federal regulations forbid the transmission of encrypted, encoded or classified traffic in the amateur band. All Federal regulations governing the use of amateur radio apply. All Federal regulations governing the use of Federal frequencies apply.

3.4 SHARES Operating Procedures C General. The terms, operating rules, and procedures outlined in this section are generally accepted throughout the HF community. The information provided in this section should be of particular interest to operators with little or no communications experience. Also, more experienced radio operators should recognize that standard HF radio operating procedures have been adopted, insofar as practical, as the standard for SHARES HF Radio Program interagency communications.

a. Terms and Definitions. Definitions of the most commonly used terms in voice communications are as follows:

MESSAGE ORIGINATOR: The activity and/or individual responsible for writing a message.

MESSAGE ADDRESSEE: The activity and/or individual to whom the message is directed by the originator.

PHONETIC ALPHABET: A list of standard words used to identify letters in messages transmitted by radio.

CALL: The method used to advise another station that contact is desired with that location.

CALL SIGN: A combination of letters, numbers, or words assigned to a radio station for identification purposes.

MESSAGE: A written or oral exchange of information between two or more parties.

PROWORD: A word or group of words used to shorten and facilitate voice communications.

FULL CALL: Call where the call sign is transmitted once. Used under good communications conditions and can always be used if desired.

ABBREVIATED CALL: Call that omits the call sign of the station being called. Used when communications are good and firm contact has been established.

LONG CALL: Used when communications are difficult and consists of saying the call sign twice.

RELAY: A transmission processed through an intermediate HF radio station.

b. Operating Rules. Voice communication by radio is governed by the following operating rules:

(1) To ensure efficient use of circuit time, all messages should be as short as possible and written down prior to transmission. Messages which must be delivered by the receiving operator to another person or that are preceded by the proword MESSAGE FOLLOWS must be written down.

(2) Radio transmissions should be short and concise.

(3) Radio transmissions should be clearly spoken with natural emphasis on each word, and, except for the prescribed pronunciation of numerals, should be spoken in natural phrases, not word by word. Generally, words are spoken at a rate of about 100 words per minute. However, if a message is to be written down, the transmission speed must be slowed accordingly.

(4) To avoid interfering with traffic that may be in progress, the radio operator should listen to the circuit to make sure it is clear before making a transmission.

(5) The transmission of obscene, indecent, or profane language and transmission of false distress signals is prohibited by law.

c. Phonetic Alphabet. When necessary to identify any letter of the alphabet, the standard phonetic alphabet shall be used. This alphabet is included in Appendix B. Difficult words within the text of a message may be spelled using the phonetic alphabet and preceded by the proword I SPELL. If the word can be pronounced, the operator should do so before and after the spelling to identify the word.

*EXAMPLE*

KEOKUK C I SPELL C KILO ECHO OSCAR KILO UNIFORM
KILO C KEOKUK

d. Pronunciation of Numerals. To distinguish numerals from words similarly pronounced, the proword FIGURES should be used preceding such numbers. Accepted

pronunciation of numbers in HF radio communications is included in Appendix B. Numbers will be transmitted digit by digit. Multiples of thousands may be spoken as such. Figures ONE and ZERO should be written as 1 and Ø respectively to preclude confusion with the letters I and O. The radio voice transmission for a decimal point is to be spoken as DAY-SEE-MAL.

*EXAMPLE*

123.4 is to be spoken as FIGURES WUN TOO TREE DAY-SEE-MAL FOW-ER

Dates shall be spoken digit by digit with months in full.

*EXAMPLE*

20 August is spoken as TOO ZE-RO AUGUST

e. Abbreviations in the Text. The generally accepted rules for using abbreviations in the text of radio voice transmissions are as follows:

(1) Initials used alone, or in conjunction with short titles, shall be spoken phonetically. PARA A should be spoken as PARA ALFA. NCS should be spoken as NOVEMBER CHARLIE SIERRA.

(2) Personal initials should be spoken phonetically, prefixed by the word INITIALS. G. M. SMITH should be spoken as INITIALS GOLF MIKE SMITH.

(3) Punctuation should be spoken as follows:

| | |
|---|---|
| Comma | COMMA |
| Period | FULL STOP or PERIOD |
| Parenthesis | PAREN/UNPAREN or OPEN BRACKETS/CLOSE BRACKETS |
| Oblique stroke | SLANT |
| Quotation marks | QUOTE/UNQUOTE |
| Hyphen | HYPHEN |
| Colon | COLON |
| Semicolon | SEMICOLON |
| Dash | DASH |

(4) Abbreviations used in normal speech may be used in the same manner when transmitted by voice. NATO may be spoken as NATO. WASHINGTON DC may be spoken as WASHINGTON DC.

f. Most Commonly Used Prowords. Prowords are pronounceable words or groups which are assigned definite meanings, and whose purpose is to shorten and to facilitate voice communications. Prowords are never used in the text of a message. Commonly used prowords for general voice communications include:

ACKNOWLEDGE: Let us know that you have received and understand this message.

AFFIRMATIVE: Yes, or permission granted.

ALL AFTER: The portion of the message to which I have reference is all that which follows _____.

ALL BEFORE: The portion of the message to which I have reference is all that which precedes _____.

BREAK: Indicates separation of text from other portions of the message.

CANCEL: Cancel my transmission _____ (Transmission identification or DTG). Not to be confused with proword DISREGARD THIS TRANSMISSION.

CORRECTION: A transmitting error has been made. Continue with the last word correctly transmitted.

DISREGARD THIS TRANSMISSION: This transmission is in error. Disregard it. Should not be used to cancel a message that has been completely transmitted and for which receipt of acknowledgment has been received.

FIGURES: Numerals or numbers follow.

FOR: Transmit this message to all addressees or to the address designations immediately following.

I READ BACK: The following is my response to your request to read back.

I SAY AGAIN: I am repeating transmission or portion of transmission indicated.

I SPELL: I shall spell the next word phonetically.

I VERIFY: That which follows has been verified at your request and is repeated. Used only as a reply to VERIFY.

MESSAGE FOLLOWS: Indicates information to follow.

NEGATIVE: No, or that is not correct.

OUT: This is the end of my transmission to you, and no answer is required or expected.

OVER: This is the end of my transmission to you and a reply is required. Go ahead, transmit.

READ BACK: Repeat all, or the specified part, of this message exactly as received.

RELAY (TO): Transmit this message to all addresses or to the address designations immediately following.

ROGER: I have received your last transmission. This proword is not to be used in the sense of OK, will do, or affirmative.

SAY AGAIN: Repeat all or part of your last transmission.

SPEAK SLOWER: Your transmission is too fast. Reduce speed of transmission.

STAND BY: Self-explanatory.

THAT IS CORRECT: You (or the transmission) are correct.

THIS IS: This transmission is from the station whose designation immediately follows.

VERIFY: Verify entire message (or portion indicated) with the originator and send correct version.

WAIT: I must pause for a few seconds.

WAIT OUT: I must pause longer than a few seconds.

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 precedes _____.

WORDS TWICE: Communication difficult. Transmit each phrase twice. This proword may be used as an order, request, or as information.

WRONG: Your last transmission was incorrect. The correct version is _____.

g. Microphone Techniques. It is important to use prescribed microphone techniques when operating a radio. Most microphones used today are extremely sensitive and should be held or placed about one-half inch from your lips and spoken into at a normal level without raising your voice. The use of correct procedures shortens transmission time and releases the frequency to other users. Experience shows that the four most important factors in voice communications are the degree of loudness, rate of speech, pronunciation, and pattern of speech used. A brief summary of these factors follows:

LOUDNESS: The degree of loudness (volume) to use depends on a number of factors such as propagation quality, type of emission, and type of microphone being used. Speaking too loudly on a single sideband circuit may over modulate the signal to a point where it becomes unintelligible. As a general rule of thumb, speak clearly, distinctly, and in a normal tone.

RATE OF SPEECH: There is no fixed rate of speech that is best for all occasions. Generally, words are spoken at approximately 100 words per minute. If the message is to be written down, the transmission speed should be slowed accordingly. Speak at a rate which sounds natural, and allows the message to be written down by the receiving operator.

PRONUNCIATION: The third factor for good readability is the clear and distinct pronunciation of all sounds, syllables, and words. Words not pronounced distinctly may be misunderstood. Give all words a commonly accepted pronunciation.

PATTERN: Good readability in voice communications requires a Anot too fast, not too slow@ rate of speech and strict attention to pronunciation. A radio message should not be transmitted word-by-word. It should be transmitted idea by idea, with adequate spacing between the words that make up the separate ideas. To ensure understandability, radio transmissions should be similar to conversational speech.

3.5 SHARES Operating Procedures C Specific. The terms, operating rules, and procedures contained in this section are those that are considered either peculiar to SHARES interagency operations or are generally accepted HF radio operating procedures which are of critical importance. It is highly recommended that all radio operator personnel, experienced or inexperienced, be familiar with this information before attempting to pass SHARES HF Radio Program messages.

a. Definition of Terms. Some important new terms are unique to SHARES. They are defined here to clarify operating procedures.

SHARES EMERGENCY READINESS NOTICE: A notice distributed through the entity=s SHARES HF Interoperability Working Group member to participating SHARES stations advising the stations of a request for SHARES support. The preformatted SHARES Emergency Readiness Notice is shown in Appendix D.

SHARES COORDINATING FREQUENCIES: Frequencies used by SHARES to coordinate operational events. Coordinating frequencies are not used for SHARES message traffic.

SHARES MESSAGE: A message satisfying the criteria of paragraph 1.5c(2) and which bears the flagword SHARES.

SHARES NETWORK: Refers to the capability for a Federal agency to call another Federal agency on the latter=s assigned SHARES frequency to pass SHARES message traffic.

SHARES PARTICIPANT: Any military or non-military Federal entity subscribing to the SHARES HF radio capability.

SHARES PROGRAM WORKBOOK: A three-ring binder distributed to participating SHARES stations and Federal emergency planning and response personnel which contains all SHARES support documents.

SHARES STATION: Any Federal or federally affiliated radio station identified to participate in the SHARES program.

SHARES HF DIRECTORY (NCS Handbook 3-3-1): Listings of HF radio stations and their capabilities identified to participate in the SHARES HF Radio Program.

b. Operating Rules. In addition to the operating rules discussed in paragraph 3.4b, the following specific rules for handling SHARES traffic apply:

(1) SHARES messages are handled on a voluntary, non- interfering basis only.

(2) SHARES messages will be handled in priority order, relative to other mission critical emergency traffic, following the procedures established by the Federal entity (or station) handling the traffic.

(3) SHARES messages will be transmitted using any of the modes of operation listed in the SHARES Directory. Classified messages shall be transmitted only when the classified portion of the message can be encrypted, either during transmission (on-line), or before transmission (off-line).

(4) The SHARES concept does not provide the authority for an agency to call another agency on a third agency=s frequency, or to call any other station or use any frequency not listed in the SHARES HF Directory.

(5) Federal HF radio stations not listed in the SHARES HF Directory are authorized to transmit and receive SHARES message traffic within their own networks in accordance with network and agency policy.

c. Time. Coordinated Universal Time, referred to as ZULU time, has been adopted for use in the SHARES program. The time zone designator AZULU@ or AZ@ corresponds to the time zone encompassing the Prime Meridian (Greenwich, England). ZULU time uses the 24-hour clock to establish a standard method of reporting time and to distinguish AM from PM. ZULU time is 5 hours ahead of Eastern Standard Time (EST). A quick reference chart which converts standard clock time to 24-hour clock time and to ZULU time for each time zone, and a time zone map are shown in Appendix B.

d. Establishing Contact. There are two types of calls used in HF radio communications for establishing contact with another station - FULL CALLS and LONG CALLS.

FULL CALLS: Full Calls, or normal calls, are used under good communications conditions. Their use at any time is acceptable.

*EXAMPLE*

KILO ALFA PAPA 111 C THIS IS WHISKEY GOLF TANGO
213 WITH SHARES TRAFFIC C OVER

Detailed procedures for ESTABLISHING CONTACT and ESTABLISHING CONTACT C RELAY are contained in Appendix B.

LONG CALLS: Long Calls are used when communications conditions are difficult. The long call consists of transmitting the full call sign twice.

*EXAMPLE*

KILO ALFA PAPA 111 C KILO ALFA PAPA 111 C THIS IS WHISKEY GOLF TANGO 213 C WHISKEY GOLF TANGO 213 WITH SHARES TRAFFIC C OVER

When establishing contact it is important to include WITH SHARES TRAFFIC as shown in the above examples.

ABBREVIATED CALLS: Under good conditions, abbreviated calls may be used after contact is established.

*EXAMPLE*

THIS IS WHISKEY GOLF TANGO 213 C OVER [or] 111 THIS IS 213 C OVER

If the selected station does not answer, use the SHARES Directory to select another station to deliver or relay the message. Repeat the process until contact is made and the message is passed for delivery to the addressee or for relay to another station.

ANY STATION CALL: The general call ANY STATION, said three times, then followed by the calling station call sign, will be used when contact cannot be established using normal procedures. When the general call ANY STATION is used, the calling operator is telling any station on that frequency that assistance is needed. Any operator hearing the general call should try to establish contact with the calling station and offer assistance.

*EXAMPLE*

ANY STATION C ANY STATION C ANY STATION C THIS IS KILO ALFA PAPA TWO FIVE SIX WITH SHARES TRAFFIC C OVER

e. Handling (Receiving or Transmitting) a SHARES Message. A radio operator may receive a SHARES message from any of three different sources. First, a message may be received by local means from the message originator for transmission on the SHARES network. Second, a message may be received by radio from another SHARES station for delivery to a local message addressee. Third, a message may be received by radio from another SHARES station for relay to yet another SHARES station. The following procedures should be used when a SHARES message is received:

(1) Receiving a SHARES Message from a Local Originator. If the message is received from a local message originator, the operator should copy the complete message using a SHARES Message Form. The operator should ensure that all of the information required for transmission of the message has been recorded on the message form. An example of the SHARES Message Form is contained in Appendix B. If a Date-Time-Group has not been assigned, the operator shall assign one.

(2) Transmitting a SHARES Message. When a message is received for transmission, the operator shall determine the city and state to which the message is addressed. Using the SHARES HF Directory, find a SHARES station in that city or state. If none is available, identify a station as close as possible to the message addressee=s location. Determine the compatibility of the distant station (*i.e.*, station Time of Operation and Mode of Operation). If compatible, determine if the distant station has a usable frequency in terms of time of day and distance. If so, the operator should try to contact the distant station using the call sign listed in the Directory. After contacting the distant station, the message should be passed using the radio procedures in Appendix B.

If unable to contact the desired station directly, repeat the process to select a relay station, make contact, and pass the message. If after several attempts contact has not been established, a message may be transmitted in the blind. To transmit a message in the blind, use the calling procedure for ANY STATION, followed by the words TRANSMITTING IN THE BLIND, followed by the radio message. This procedure should be repeated twice on as many selected frequencies as is necessary. If contact is established after transmitting in the blind, the message should be retransmitted for either delivery or relay.

(3) Receiving a SHARES Message from a Distant Station. A distant station may make contact to either relay a message or deliver a message within the local area. In either case, the message should be copied onto a SHARES Message Form and the Time of Receipt (TOR) recorded. If for local delivery, deliver the message to the addressee and write the Time of Delivery (TOD) on the message form. If for relay, follow radio relay procedures contained in the next paragraph.

(4) Relaying a SHARES Radio Message. Relay procedures are used when a message cannot be sent directly to a station within the local area of the addressee. The proword RELAY TO followed by the call sign or address indicates that the station called is to relay the message to the station or location indicated.

*EXAMPLE*

KAP 256 transmits to KAP 259 to relay a message to KAP 255 (abbreviated calls are in use):

TWO FIVE NINE C THIS IS TWO FIVE SIX C RELAY
TO TWO FIVE FIVE C TIME ONE ONE TWO TWO THREE
FIVE ZULU JANUARY C FROM (originator) C TO
(addressee) C BREAK C MESSAGE FOLLOWS C OVER

The Date-Time-Group is written as 112235Z JAN. The 11 indicates the day of the month, 2235 indicates the time, the Z indicates use of ZULU time, and JAN indicates the month.

f. Message Reply or Acknowledgment. As a general rule, after a message has been transmitted, the transmitting station should return to one of its assigned operating frequencies. However, in those cases when a reply or acknowledgment is requested, the following may occur:

(1) The transmitting station advises the receiving station that it will stand by on the present operating frequency or will return to its own operating frequency to wait for the reply.

(2) The receiving station, if able to give an immediate reply, will request the transmitting station to remain on frequency for the reply.

(3) If no reply or acknowledgement is required, return to your assigned operating frequency when SHARES message transmission is complete.

g. Using the SHARES Message Form. The SHARES Message Form is to be used for all transmitted and received message traffic. For record purposes, the Operator Notes contained at the bottom of the SHARES Message Form should be completed in all cases. An example of a completed SHARES Message Form is provided in Appendix B. Blank copies of the SHARES Message Form are included in the SHARES Program Workbook.

h. Frequency Selection Procedures. A unique feature of SHARES, as compared to normal Federal station operation, is the necessity to select operating frequencies which are not assigned for intra-agency use. Proper choice of frequency will normally permit communications over the desired distance. Successful operating frequencies are selected on the basis of distance to receiving station, time of day, season of the year, and stages of the 11-year sunspot cycle. Knowing in advance how good or bad general atmospheric propagation will be during a certain period can help immensely in selecting a frequency that will be clear enough to maintain contact and pass traffic. This information is available and can be obtained from several different propagation documents. However, if the documents are not available, or the radio operator is not experienced, the following Arules of thumb@ may be helpful in choosing workable frequencies.

DISTANCE: The closer the receiving station, the lower the frequency. The farther the receiving station, the higher the frequency. As a general rule, the following apply:

| Distance in Miles | Frequency Range (MHz) |
|---|---|
| 200-700 | 4-9 |
| 700-1300 | 9-13 |
| 1300-2000 | 13-25 |

TIME: During daylight hours, use a higher frequency. During nighttime hours, use a lower frequency.

i. SHARES Events Log. The SHARES Events Log is used to record station activities concerning the SHARES event. A thorough recording of all station activity is important for subsequent analysis of SHARES operations. An example of a completed SHARES Events Log is provided in Appendix B. Blank copies of the SHARES Events Log are included in the SHARES Program Workbook.

**THE SHARES CONCEPT DOES NOT PROVIDE THE AUTHORITY FOR AN AGENCY TO CALL ANOTHER AGENCY ON A THIRD AGENCY=S FREQUENCY, OR TO CALL ANY OTHER STATION, OR USE ANY FREQUENCY NOT LISTED IN THE SHARES HF RADIO PROGRAM DIRECTORY.**

# CHAPTER 4: TRAINING PROCEDURES

4.1 General. This section provides general guidance on what is expected of Federal departments, agencies, and radio stations in conducting SHARES training and how to set up an informal, in-house training program. Training is the most critical element that supports establishing and maintaining a SHARES operational readiness posture. It is not sufficient to train only radio operators to handle SHARES traffic. Equally important is that there be a general awareness among management and administrative personnel that the capability exists and that certain administrative functions must be performed to establish and maintain this capability. Even non-communications personnel working where the telephones (listed in the SHARES Directory) are located need to be aware of the implications of the flagword SHARES. Following this general training philosophy, the recommended training procedures are given in the form of a study guide to lesson plans for various functional personnel categories. It is important that management personnel, and particularly those personnel authorized to release emergency traffic, are aware of the SHARES HF capability and how to use it.

4.2 SHARES User Training Responsibilities. Each Federal user is responsible for conducting SHARES training to support national leadership requirements and their own emergency high frequency communications mission requirements. Training may be conducted informally by any method chosen to satisfy mission needs. Federal users may participate in NCS-directed readiness exercises on a voluntary basis as a part of their training program.

4.3 Study Guide. To assist in establishing an informal, in-house SHARES training program, a study guide in the form of lesson plans for each personnel category is provided below. Each lesson plan defines which sections of the manual are to be studied. Periodic refresher training should be conducted as well as initial training for newly assigned personnel.

| LESSON | SECTIONS |
|---|---|
| 1 | Chapters 1 and 2 |
| 2 | Review paragraphs 2.4 and 2.6 |
| 3 | HF Directory. Review paragraphs 2.5 and 2.6 |
| 4 | Chapter 4. Review paragraphs 2.5 and 2.6 |
| 5 | Paragraphs 3.1, 3.2, 3.3 |
| 6 | Paragraph 3.4 and Appendix B |

| LESSON | SECTIONS |
|---|---|
| 7 | Paragraph 3.5 and Appendix B |
| 8 | HF Directory |
| 9 | Review all |

| PERSONNEL | LESSONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Management | * | | | | | | | | |
| Message Originators | * | | | | * | | | | |
| Administrative | * | | | | | | | | |
| Security | * | * | | | | | | | |
| Logistics | * | | * | | | | | | |
| Training | * | | | * | | | | | |
| Communications | * | * | * | * | * | | | | |
| Radio Station (All) | * | | | | * | | | | |
| Radio Operator | * | * | * | * | * | * | * | * | * |

4.4 HF Radio Operator Proficiency Evaluation. Each Federal user should establish a method for evaluating the proficiency of radio operators. Each radio operator should be capable of receiving SHARES traffic (by high frequency radio or other local means), establishing contact, and transmitting and relaying SHARES traffic. In addition, radio operators should be proficient in using the phonetic alphabet, converting standard clock time to 24-hour time, using ZULU time, assigning Date-Time-Groups, using the SHARES Message Form and SHARES HF Directory, and in frequency selection procedures and microphone techniques.

4.5 SHARES Operational Readiness Training. The capability for SHARES HF network subscribers to support national leadership requirements and expand emergency HF communications capability in the Federal community is dependent upon training. Departments, agencies, and radio stations are encouraged to establish and maintain an in-house SHARES training program and to voluntarily participate in NCS-sponsored SHARES readiness exercises. In addition to participation in national readiness exercises, Federal agencies may conduct interagency or intra-agency SHARES exercises, using SHARES radio operating procedures, in order to maintain a SHARES readiness capability. Interagency SHARES exercises may be conducted with other federally controlled radio stations by arranging such support and participation with the Federal agency or department.

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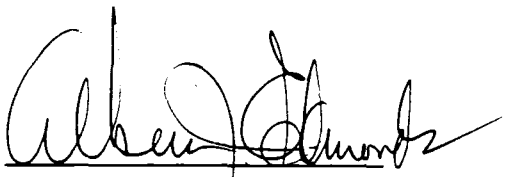
## CHAPTER 5: EFFECTIVE DATE, EXPIRATION, AND ISSUING AUTHORITY

5.1 Effective Date. This manual is effective immediately.

5.2 Expiration. This manual is in effect until superseded or cancelled.



ALBERT J. EDMONDS
Lieutenant General, USAF
Manager

6 Appendices:
A. Concept of Operations
B. Quick References
C. SHARES HF Interoperability Working Group Terms of Reference
D. SHARES Emergency Readiness Notice
E. SHARES Station Data Form
F. SHARES ALE Address Code Registration Form

Summary of Changes:

1. Initial Publication: May 1, 1989
2. Second Publication: June 27, 1991
3. Third Publication: August 1, 1995

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# APPENDIX A: CONCEPT OF OPERATIONS

## A Concept of Operations for a Shared Resources High Frequency Network (SHARES)

### I. Introduction.

Many Federal departments and agencies use high frequency (HF) radio communications systems to support their mission responsibilities. Both the extent of these systems and the propagation characteristics of the HF spectrum suggest the use of these assets in times of National Security and Emergency Preparedness (NS/EP) emergencies when regular communications links are destroyed or disrupted.

The projected use of Federal assets in this way would meet NS/EP objectives of infrastructure development and interoperability.[1] These objectives, however, are not easily attainable because of conflicts with the mission priorities of the controlling Federal entities. Stated differently, the SHARES operation would come into being at a time when departments and agencies are involved in fulfilling their own emergency responsibilities. The SHARES network is proposed with the explicit understanding that it is only an additional means of achieving interoperability using existing resources in a way that will not interfere with the essential operations of the participants.

### II. Mission.

Development of the SHARES network is intended to provide backup capability to exchange critical information among Federal entities by HF radio in crisis situations.

The nature of the demands that will be made on Federal departments and agencies during emergency and crisis situations is unpredictable. Executive Order 12472 recognizes NS/EP planning constraints by assigning tasks to various entities in what is essentially a continuum of critical situations. No attempt is made to specify when a situation becomes a crisis, for example, other than the declaration by the President of a national emergency as provided by law.[2] In practical terms, Federal entities must be prepared to meet a variety of unpredictable events in timely effective ways. The SHARES concept should contribute to this capability.

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[1] See NSDD-97 and Executive Order 12472.

[2] Section 706 of the Communications Act of 1934, as amended, is particularly relevant.

III. Operational Concept.

The successful use of Federal entity HF assets during critical situations mandates the establishment of accepted procedures prior to need. Competition for surviving assets will be intense and the operating environment one of stress and makeshift arrangements. Operating personnel may not be proficient in, or even acquainted with, regular operating protocols. Planning for SHARES capability must therefore rely on development of easily understood, standardized methodology.

The SHARES network should be built upon the following basic tenets:

1. Any participating Federal entity will accept, to the extent that acceptance does not interfere with the mission responsibilities of the entity, emergency messages of other Federal entities, or other components of the same entity, for transmission by HF radio to the addressee or to another participant for relay to the addressee. The public switched telephone network may be used to complete message transmission if available.

2. A SHARES message is an emergency message to be sent via the SHARES network. It consists of information that must be communicated to a Federal entity and is of critical importance to the Federal Government, the entity=s mission, and/or involves the preservation of life and the protection of property.

3. SHARES messages will be transmitted as unclassified information using clear voice or teletype in any compatible mode. No classified messages will be accepted.

4. Procedures for use of the SHARES network shall be unclassified insofar as possible, and written so as to permit persons with minimal training to successfully participate in the SHARES network.

5. Transmission of SHARES messages will be guided by the policy of the agency accepting the message. Advice that a ASHARES Message@ is to be transmitted will serve to notify operating personnel that a critical NS/EP message requirement exists, and implicitly, that normal communication paths are not available.

6. The initial participants in the SHARES network will be Federal departments and agencies, both military and non-military, and will include the assets of Federally controlled entities. Further, potential participants may include amateur radio operators with access to HF radio equipment and who are recognized by a Federal department or agency. Network structure will be determined through extensive testing and analysis of proposed network configurations.

7. A directory of federally controlled radio station capabilities shall be compiled with appropriate guidelines for use in the SHARES program. A classified directory may be issued by participating departments and agencies if needed. Publication and maintenance of a SHARES directory are the responsibility of the Office of the Manager, National Communications System (OMNCS).

IV. Frequency Assignments.

Probably the most critical factor in establishing SHARES capability is that of frequency selection and coordination. The HF spectrum offers a medium in which a reliable network can be established using unsophisticated equipment operating over a wide range of frequencies. Network design is not without inherent problems, however, because of the lack of common operating frequencies, varying modulation techniques, propagation anomalies, and the like.

Given the operating environment described above, initial SHARES frequency selection will proceed as follows:

1. The identification of candidate frequencies will be made by the entity to which the frequencies are assigned, upon which SHARES messages may be accepted on a non-interference basis.

2. If the development of the SHARES concept dictates the advisability of establishing certain common frequencies upon which initial contact (or Acall up@) would be made, the determination of such frequencies will be made by the participating entities. The establishment of common frequencies for SHARES would be predicated on an agreement by participants to monitor the frequencies so designated. Any frequencies to be used for SHARES will be appropriately recognized by the National Telecommunications and Information Administration (NTIA), with the advice of the Interdepartment Radio Advisory Committee (IRAC).

3. Frequencies upon which SHARES messages may be handled may be noted by NTIA in the Emergency Readiness Plan for Use of the Radio Spectrum (ERP). The ERP, however, because of its ASecret@ level classification, is not suitable for use as a SHARES directory.

V. Responsibilities of Departments and Agencies.

In accordance with the charge of the NCS Council of Representatives to examine the feasibility of the SHARES concept and to develop an implementation plan if warranted, the OMNCS will oversee the development and testing process and provide such administrative support as is necessary. Each prospective Federal entity participant will identify those frequencies under its control that can be listed for potential SHARES use and will undertake to integrate SHARES capability into its HF communications operations.

The development and the readiness condition of SHARES depends on the continuing cooperative efforts of all participants. These cooperative efforts extend to the development and adoption of HF equipment standards so as to enhance capability. Further, because sensitive, national security-related information may need to be transmitted over the SHARES network, all participants will examine ways in which cost-effective and interoperable protection measures can be incorporated to provide network integrity.

VI. Sanctioning.

The SHARES concept and plan of implementation, upon completion of appropriate tests and analyses by prospective participants, will be submitted for formal sanction by the NCS Committee of Principals through the NCS Council of Representatives.

# APPENDIX B: QUICK REFERENCES

TITLE PAGE

## 1. PHONETIC ALPHABET

LETTERS. When necessary to identify any letter of the alphabet, the standard phonetic alphabet should be used. The phonetic alphabet is as follows:

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

Syllables underlined carry the accent. Difficult words within the text of a message may be spelled using the phonetic alphabet and preceded by the proword I SPELL. If the word can be pronounced, the operator will do so before and after the spelling to identify the word.

*EXAMPLE*

KEOKUK ⊂ I SPELL ⊂ KILO ECHO OSCAR KILO UNIFORM KILO ⊂ KEOKUK.

NUMERALS. To distinguish numerals from words similarly pronounced, the proword FIGURES may precede the numbers. Numbers are pronounced as follows:

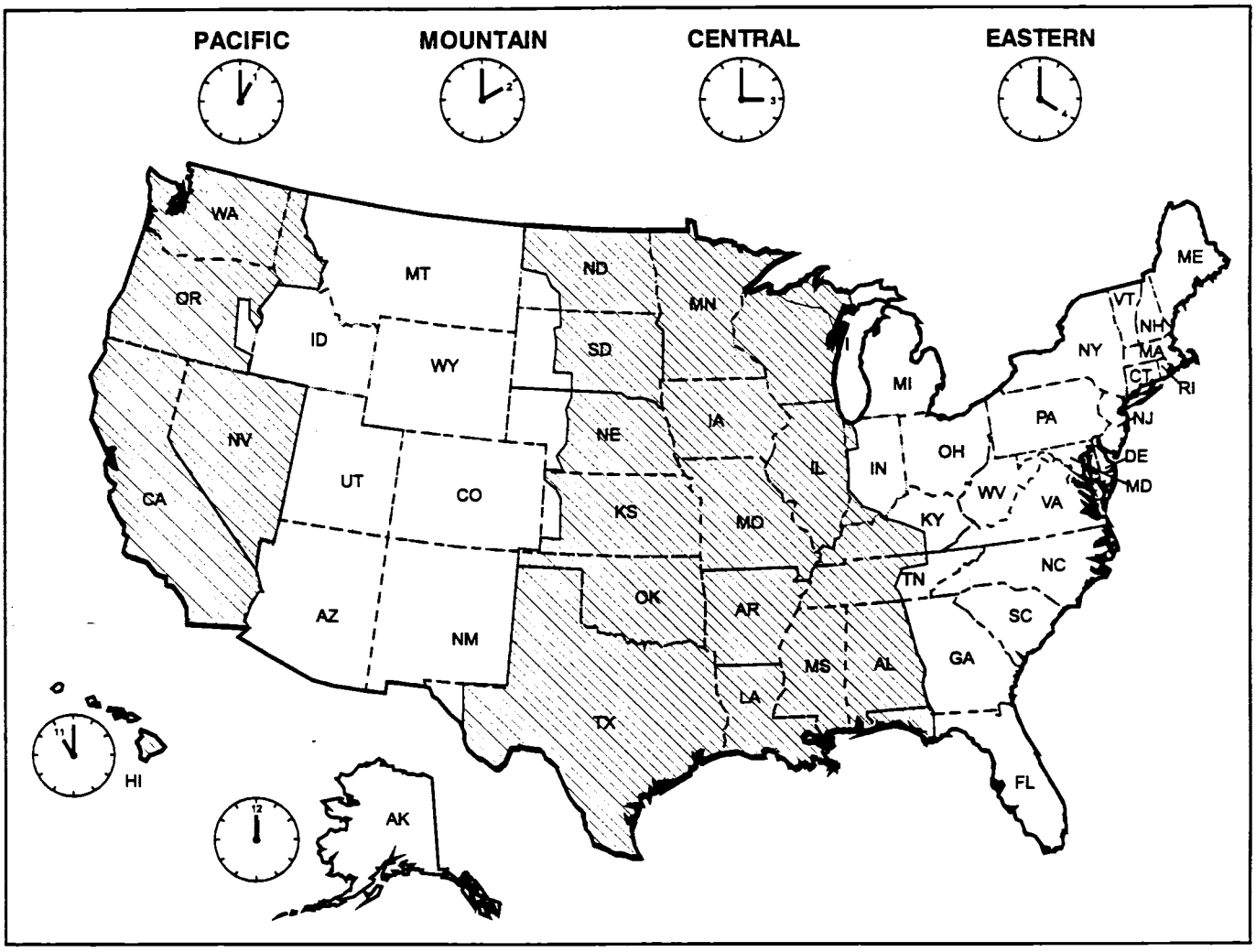
| Number | Spoken as | Number | Spoken as |
|---|---|---|---|
| 0 | ZE RO | 5 | FIFE |
| 1 | WUN | 6 | SIX |
| 2 | TOO | 7 | SEV EN |
| 3 | TREE | 8 | AIT |
| 4 | FOW ER | 9 | NIN ER |

## 2. TIME CONVERSION

Coordinated Universal Time, referred to as ZULU time, is used in the SHARES program. ZULU or "Z" time uses the 24-hour clock to establish a universal standard way of telling time and to distinguish AM from PM. Where practical, the time 2400 and 0000 should be avoided unless it is necessary to indicate these particular instants in time; instead use 2359 or 0001. Although interchangeable, 0000 is usually associated with the date of the day just beginning; 2400 with the day ending. The following chart converts standard clock time to 24-hour clock time and to ZULU time for each U.S. time zone:

| Clock | 24 HR | ZULU | EDT | CDT/ EST | MDT/ CST | PDT/ MST | PST |
|---|---|---|---|---|---|---|---|
| **AM** | | | | | | | |
| 12:00 | 0000 | 0400 | 0000 | 2300 | 2200 | 2100 | 2000 |
| 1:00 | 0100 | 0500 | 0100 | 0000 | 2300 | 2200 | 2100 |
| 2:00 | 0200 | 0600 | 0200 | 0100 | 0000 | 2300 | 2200 |
| 3:00 | 0300 | 0700 | 0300 | 0200 | 0100 | 0000 | 2300 |
| 4:00 | 0400 | 0800 | 0400 | 0300 | 0200 | 0100 | 0000 |
| 5:00 | 0500 | 0900 | 0500 | 0400 | 0300 | 0200 | 0100 |
| 6:00 | 0600 | 1000 | 0600 | 0500 | 0400 | 0300 | 0200 |
| 7:00 | 0700 | 1100 | 0700 | 0600 | 0500 | 0400 | 0300 |
| 8:00 | 0800 | 1200 | 0800 | 0700 | 0600 | 0500 | 0400 |
| 9:00 | 0900 | 1300 | 0900 | 0800 | 0700 | 0600 | 0500 |
| 10:00 | 1000 | 1400 | 1000 | 0900 | 0800 | 0700 | 0600 |
| 11:00 | 1100 | 1500 | 1100 | 1000 | 0900 | 0800 | 0700 |
| **PM** | | | | | | | |
| 12:00 | 1200 | 1600 | 1200 | 1100 | 1000 | 0900 | 0800 |
| 1:00 | 1300 | 1700 | 1300 | 1200 | 1100 | 1000 | 0900 |
| 2:00 | 1400 | 1800 | 1400 | 1300 | 1200 | 1100 | 1000 |
| 3:00 | 1500 | 1900 | 1500 | 1400 | 1300 | 1200 | 1100 |
| 4:00 | 1600 | 2000 | 1600 | 1500 | 1400 | 1300 | 1200 |
| 5:00 | 1700 | 2100 | 1700 | 1600 | 1500 | 1400 | 1300 |
| 6:00 | 1800 | 2200 | 1800 | 1700 | 1600 | 1500 | 1400 |
| 7:00 | 1900 | 2300 | 1900 | 1800 | 1700 | 1600 | 1500 |
| 8:00 | 2000 | 2400 | 2000 | 1900 | 1800 | 1700 | 1600 |
| 9:00 | 2100 | 0100 | 2100 | 2000 | 1900 | 1800 | 1700 |
| 10:00 | 2200 | 0200 | 2200 | 2100 | 2000 | 1900 | 1800 |
| 11:00 | 2300 | 0300 | 2300 | 2200 | 2100 | 2000 | 1900 |
| 12:00 | 2400 | 0400 | 2400 | 2300 | 2200 | 2100 | 2000 |

# 3. TIME, STATE REFERENCE MAP



## 4. ESTABLISHING CONTACT

Press the microphone button and say:

_____ **THIS IS** _____ **WITH SHARES TRAFFIC OVER**
(called station C/S) (your C/S)

Release the microphone button. Listen for a reply to your call. If nothing is heard after approximately 15 seconds, repeat the call. The reply should be:

_____ **THIS IS** _____ **OVER**
(your C/S) (called station C/S)

If after several attempts contact has not been established, use the SHARES HF Directory to find the call sign and frequency of a station in the same general area. Repeat the calling procedures until contact has been established. After the reply has been heard, press the microphone button and say:

_____ **THIS IS** _____
(called station C/S) (your C/S)

**I HAVE SHARES TRAFFIC FOR** _____ **OVER**
(location)

Release the microphone button. Listen for a reply from the called station stating that the station is ready to receive the message. The reply should be:

_____ **THIS IS** _____
(your C/S) (called station C/S)

**ROGER SEND YOUR MESSAGE OVER**

Proceed to transmit the message.

C/S = Call Sign

## 5. ESTABLISHING CONTACT - RELAY

Press the microphone button and say:

**_____ THIS IS _____ WITH SHARES TRAFFIC OVER**
(called station C/S) (your C/S)

Release the microphone button. Listen for a reply to your call. If nothing is heard after approximately 15 seconds, repeat the call. The reply should be:

**_____ THIS IS _____ OVER**
(your C/S) (called station C/S)

If after several attempts contact has not been established, use the SHARES HF Directory to find the call sign and frequency of a station in the same general area. Repeat the calling procedures until contact has been established. After the reply has been heard, press the microphone button and say:

**_____ THIS IS _____**
(called station C/S) (your C/S)

**I HAVE SHARES TRAFFIC FOR _____**
(location)

**REQUEST YOU RELAY OVER**

Release the microphone button. Listen for a reply from the called station stating that the station is ready to receive the message. The reply should be:

**_____ THIS IS _____**
(your C/S) (called station C/S)

**ROGER SEND YOUR MESSAGE OVER**

Proceed to transmit the message.

C/S = Call Sign

## 6. RECEIVING A MESSAGE

Advise the calling station you are ready to copy the message by pressing the microphone button and saying:

**_____ THIS IS _____ OVER**
(calling station C/S) (your C/S)

Release the microphone button. The calling station will now start to send the message. Use the SHARES Message Form to copy the message as it is received. The message should be transmitted as follows:

**_____ THIS IS _____**
(your C/S) (calling station C/S)

**TIME _____**
(day time month)

**FROM _____**
(name agency city state phone)

**TO _____**
(name agency city state phone)

**MESSAGE CONTAINS ( __ ) PARAGRAPH(S)**

**MESSAGE FOLLOWS**

**PARA 1 THIS IS A SHARES (EXERCISE) MESSAGE.**

**PARA 2** [text]

**END OF MESSAGE OVER**

Press the microphone button and say:

**ROGER COPIED OVER**

Release the microphone button.

C/S = Call Sign

## 7. RECEIVING A MESSAGE C CONDITIONS DIFFICULT

Advise the calling station you are ready to copy the message by pressing the microphone button and saying:

_____ **THIS IS** _____ **OVER**
(calling station C/S) (your C/S)

Release the microphone button. The calling station will now start to send the message. Use the SHARES Message Form to copy the message as it is received. The message should be transmitted as follows:

_____ **THIS IS** _____
(your C/S) (calling station C/S)

**TIME** _____
(day time month)

**FROM** _____
(name agency city state phone)

**TO** _____
(name agency city state phone)

**MESSAGE CONTAINS (__) PARAGRAPH(S)**

The calling station may at this time inquire how you are copying the message by saying HOW COPY OVER. If the message was received correctly, press the microphone button and say:

**ROGER GO AHEAD WITH THE MESSAGE OVER**

Release the microphone button. If message parts were missed, press microphone button and say:

**REQUEST YOU SAY AGAIN** [say what is needed] **OVER**

C/S = Call Sign

Release the microphone button. After retransmitting the missing message parts, the calling station should say **HOW COPY OVER**. If copied correctly, press microphone button and say:

**ROGER COPIED OVER**

Release the microphone button. If message parts were missed, continue to ask for repeats until the missed parts are received. After being advised that the missed parts are received, the calling station=s reply should be:

**MESSAGE FOLLOWS**

**PARA 1 THIS IS A SHARES (EXERCISE) MESSAGE**

**PARA 2** [text]

**END OF MESSAGE**

If the message is received correctly, press the microphone button and say:

**THIS IS** _____ **ROGER COPIED OVER**
(your C/S)

Release the microphone button. The reply from the calling station should be **THIS IS** [calling station C/S] **ROGER OUT**. If parts of the message were missed, press the microphone button and say:

**REQUEST YOU SAY AGAIN** [say what is needed] **OVER**

Release the microphone button. Repeat the request until the entire message is received.

C/S = Call Sign

## 8. TRANSMITTING A MESSAGE

After being advised by the called station to send your message, press the microphone button and say:

**_____ THIS IS _____**
(called station C/S) (your C/S)

**TIME _____**
(day time month)

**FROM _____**
(name agency city state phone)

**TO** _____
(name agency city state phone)

**MESSAGE CONTAINS (__) PARAGRAPH(S)**

**MESSAGE FOLLOWS**

**PARA 1 THIS IS A SHARES (EXERCISE) MESSAGE**

**PARA 2** [text]

**END OF MESSAGE**

Release the microphone button. Listen for a reply from the called station advising that the message has been received. The reply should be **ROGER COPIED OVER**. Press the microphone button and say:

**ROGER OUT**

Release the microphone button.

C/S = Call Sign

## 9. TRANSMITTING A MESSAGE C CONDITIONS DIFFICULT

After being advised by the called station to send your message, press the microphone button and say:

_____ **THIS IS** _____
(called station C/S) (your C/S)

**TIME** _____
(day time month)

**FROM** _____
(name agency city state phone)

**TO** _____
(name agency city state phone)

**MESSAGE CONTAINS (__) PARAGRAPH(S)**

Release the microphone button and pause one or two seconds. Press the microphone button and say:

**HOW COPY OVER**

Release the microphone button. Listen for a reply similar to **ROGER GO AHEAD WITH MESSAGE OVER,** or **REQUEST YOU SAY AGAIN** [what is needed] **OVER**. If the called station requests you repeat parts of the message, press the microphone button and say:

**I SAY AGAIN** [repeat what is needed] **OVER**

Release the microphone button. The receiving station should acknowledge by saying **ROGER COPIED GO AHEAD WITH MESSAGE OVER**, or may request a retransmission of part or all of the transmission. Once advised to **GO AHEAD WITH THE MESSAGE**, press the microphone button and say:

**MESSAGE FOLLOWS**

**PARA 1 THIS IS A SHARES (EXERCISE) MESSAGE.**

**PARA 2** [text]

C/S = Call Sign

Recommend that after sending approximately three lines or several long sentences, ask the called station operator how the message is being received. If repeats are required, give them using the procedures above. After the last paragraph is transmitted, say:

**END OF MESSAGE OVER**

Release the microphone button. Listen for a reply from the called station advising that the message was received. The reply should be **ROGER COPIED OVER**. Press the microphone button and say:

**ROGER OUT**

Release the microphone button. If the reply is a request to repeat parts of the message, retransmit the missed parts following the above procedures.

C/S = Call Sign

# 10. SHARES MESSAGE FORM

## SHARES HF RADIO PROGRAM
### MESSAGE FORM

**WNHM 73** (CALLED STATION CALLSIGN) THIS IS **KKL 15** (CALLING STATION CALLSIGN)

TIME: **031135Z OCT** (ZULU)
DAY TIME MONTH

FROM: **EMERGENCY COORDINATOR** (NAME) **FEMA** (AGENCY) **ST. LOUIS, MO** (CITY STATE) **725-991-1800** (PHONE)

TO: **MR. JOHN DOE** (NAME) **FHWA** (AGENCY) **WASHINGTON, DC** (CITY STATE) **202-689-1343** (PHONE)

MESSAGE CONTAINS (**2**) PARAGRAPHS

MESSAGE FOLLOWS

PARA 1 THIS IS A SHARES (EXERCISE) MESSAGE. **F001**

PARA 2 **WE HAVE AN URGENT NEED FOR HEAVY ROAD REPAIR EQUIPMENT. PLEASE ADVISE TYPES AND QUANTITIES THAT CAN BE PROVIDED WITHIN 24 HOURS.**



END OF MESSAGE OVER

**OPERATOR NOTES**

| FOR MESSAGES RECEIVED | FOR MESSAGES TRANSMITTED | REMARKS |
|---|---|---|
| TIME: **1153Z.** (TIME MESSAGE RECEIVED) | TIME: _____ (TIME MESSAGE TRANSMITTED) | **Delivered to Mr. Doe at 1158Z.** |
| FROM: **KKL 15** (CALLSIGN) | TO: _____ (CALLSIGN) | |
| FREQUENCY: **10475 KHZ** | FREQUENCY: _____ | |
| NAME: **I.M.G.** (OPERATOR) | NAME: _____ (OPERATOR) | |

SHARES FORM 2
REV. 07/95

# 11. SHARES EVENTS LOG

## SHARES HF RADIO PROGRAM
## STATION (EVENTS) LOG

**STATION:** KKL 15

| DATE/TIME | FREQUENCY | REMARKS |
|---|---|---|
| 051155Z | | J. SMITH ON DUTY FOR SHARES EXERCISE. ALL EQUIP OPERABLE. |
| 1214Z | 12070.0 | SENT MSG AV001 TO WUI-8 (DALLAS). |
| 1238Z | 7845.0 | REC'D MSG DV001 FROM KIA 85 (TAMPA) FOR RELAY TO KJN 950. |
| 1251Z | 9462.0 | SENT MSG DV 001 TO KJN 950. |
| 1306Z | 10194.0 | RECD MSG HW001 FROM WUE 4 (WASH DC). |
| 1341Z | 7425.0 | HEARD STATION CALLING. TOO WEAK TO ESTABLISH CONTACT. |
| 1414Z | 8362.5 | TRIED TO CONTACT AGA 58 (MEMPHIS). NOTHING HEARD. |
| 1453Z | 7551.0 | CONTACTED NMW 3 (ST. LOUIS) FOR POSSIBLE RELAY. |
| 1456Z | 10448.0 | SENT MSG CP001 TO NMW 3 FOR RELAY TO AGA 58. |
| 1520Z | 13456.0 | RECD MSG TM002 FROM TANGO 15 (DENVER). |
| 1541Z | | TRANSMITTER INOPERABLE. |
| 1602Z | | REPLACED MICROPHONE. TRANSMITTER OPERABLE |
| 1609Z | 11371.0 | TRIED TO CONTACT KJL 7. NOTHING HEARD. |
| 1612Z | 13589.0 | SENT MSG CP002 TO KJL 7. STATION WEAK BUT READABLE. |
| 1630Z | | EXERCISE COMPLETED. J. SMITH CLOSES STATION. |
| | | |
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SHARES FORM 3
REV 07/95

# APPENDIX C: SHARES HF INTEROPERABILITY WORKING GROUP TERMS OF REFERENCE

I. Purpose.

This document defines the Terms of Reference for a High Frequency (HF) radio interoperability group, organized under the auspices of the Council of Representatives, National Communications System (NCS).

II. Background.

In November, 1986, the NCS Committee of Principals approved the Concept of Operations for a Shared Resources (ASHARES@) HF radio program. Other documents developed by the SHARES Working Group to support and implement the Concept of Operations are to be submitted for approval and issuance by the NCS as part of the NCS Issuance System.

The SHARES Working Group, having gained approval of the concept of emergency HF interoperability and demonstrated its feasibility, recommends that a permanent HF interoperability working group be established to pursue and achieve the objectives listed below.

III. Scope.

The scope of the activities to be undertaken is limited to the identification, consideration, and resolution, if possible, of issues bearing on the achievement of interoperability of HF radio assets in support of National Security Emergency Preparedness (NSEP) requirements in times of emergency.

The recommendations of the group formed to achieve the listed objectives shall be made to the NCS Council of Representatives, and shall be in consonance with Executive Order (EO) 12472 and other pertinent directives.

IV. Objectives.

The principle of interoperability as articulated in EO 12472 will guide attainment of the following objectives:

1. To implement the approved SHARES Concept of Operations.

2. To refine SHARES plans and procedures.

3. To maintain SHARES readiness through tests and exercises.

4. To foster interoperability through examination of regulatory, procedural, and technical issues, and make recommendations as appropriate to the NCS Council of Representatives.

V. Membership.

The SHARES HF Interoperability Working Group shall be composed of representation from each Federal department and agency participating in the SHARES program, and shall be chaired by a representative of the Office of the Manager, NCS.

VI. Meetings.

The SHARES HF Interoperability Working Group shall meet at the call of the Chair, but no less than quarterly. A meeting agenda shall be published in advance of each meeting, and all administrative arrangements in support of the Group shall be the responsibility of the Office of the Manager, NCS.

# APPENDIX D: SHARES EMERGENCY READINESS NOTICE

PRIORITY

FROM: NCS WASHINGTON DC

TO: (Each entity Point of Contact for NCSH 3-3-1)

UNCLAS

SUBJ: SHARES HF Radio Program Emergency Readiness Notice No. XX-X

REF: a. NCS Directive 3-3, AShared Resources (SHARES) High Frequency (HF) Radio Program@, September 30, 1988.

b. NCS Manual 3-3-1, AShared Resources (SHARES) High Frequency (HF) Radio Program User Manual@, August 1, 1995.

1. This SHARES HF Radio Program Emergency Readiness Notice is being issued to inform participating SHARES HF radio stations that a situation exists in which requests for SHARES assistance can be expected.

2. The following is provided concerning this Emergency Readiness Notice:

a. Requesting Entity:

b. Reason for Notice:

c. Date/Time:

d. Period of Notice:

e. Additional Information:

3. It is not the intent of this notice to direct the activation or participation of any SHARES station. Requests for SHARES assistance and station participation will be in accordance with the reference documents. Participation by your station during the effective period of this notice will, however, enhance the ability of SHARES to support this emergency situation.

4. Questions concerning this Emergency Readiness Notice can be directed to your SHARES HF Radio Program representative or to the SHARES Project Office, National Communications System, Washington, D.C.

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# APPENDIX E: SHARES STATION DATA FORM

## SHARES HF RADIO PROGRAM
## STATION DATA FORM

1. ACTION

Add New Station ☐
Delete Station ☐
Update Station Data ☐

2. AGENCY

3. STATION LOCATION

City State ZIP Code Country

STATION TELEPHONE

Commercial ( )
DSN
FAX

4. STATION CALL SIGN

5. STATION ADAPTIVE ADDRESS CODE

6. STATION FREQUENCIES

| | Primary (*) |
|---|---|
| 1. | ☐ |
| 2. | ☐ |
| 3. | ☐ |
| 4. | ☐ |

7. STATION CAPABILITIES

| | Check All That Apply |
|---|---|
| SSB Voice | ☐ |
| RTTY | ☐ |
| CW | ☐ |
| Packet (Data) | ☐ |
| FS 1045 Adaptive (ALE) | ☐ |
| SELSCAN Adaptive | ☐ |
| SELCAL Adaptive | ☐ |
| Phone Patch | ☐ |
| AMTOR | ☐ |
| PACTOR | ☐ |
| CLOVER | ☐ |
| TRANSPORTABLE | ☐ |

8. HOURS OF OPERATION

| | (Check One) |
|---|---|
| 1 - 24 Hour | ☐ |
| 2 - Part Time / Duty Hours | ☐ |
| 3 - On Call / Emergency | ☐ |

9. STATION POINT OF CONTACT

Name

Mailing Address

Telephone

10. COMMENTS

11. SUBMITTING OFFICIAL

Name Telephone Date

FOR OFFICE USE ONLY

☐ SHARES _____ ☐ SHRSINFO _____ ☐ COA/IB/M _____ ☐ OTHER ACTION: _____

SHARES FORM 1
REV. 07/95

# SHARES STATION DATA FORM - INSTRUCTIONS

## SHARES Station Data Form

### INSTRUCTIONS

1. ACTION: The Station Data Form is used to add a new station to the SHARES Program, to delete a station from the Program, or to update data on a station in the Program. Indicate the appropriate action.

2. AGENCY: Provide the full name and abbreviation for the Federal administration, agency, bureau, department, or equivalent organization with which you are most closely associated or for which you work directly (i.e., the one which is more familiar to the general public). For example, an FBI radio station would be listed as: Federal Bureau of Investigation (FBI), although it comes under the Department of Justice. The Department of the Air Force would be listed as: United States Air Force (USAF) because this is the more familiar form.

3. STATION LOCATION: Provide the city, state, and ZIP code where the station is located. For stations with remote radio facilities, provide the name of the radio operator's normal location, not the place where the remote transmitter and antenna are located. For overseas stations, provide the country name. List the appropriate telephone numbers where the station radio operator may be most readily contacted. For overseas stations, include the country code.

4. STATION CALL SIGN: Provide the official call sign assigned to the station.

5. STATION ADAPTIVE ADDRESS CODE: Provide the official address code used in the adaptive mode of operation.

6. STATION FREQUENCIES: Provide up to four (4) HF radio frequencies in kilohertz that will be used for SHARES. Where possible, identify frequencies most commonly used by the station. The frequencies listed in the SHARES Directory (NCSH 3-3-1) are the frequencies that are to be "dialed" into the tuning "window" of the radio. For Upper Sideband (USB) mode of operation, the "window" frequency is higher than the carrier by one-half of the bandwidth. Frequencies listed are understood to be USB unless specifically identified as Lower Sideband (LSB). If desired, one frequency may be identified as a "primary" frequency by a (*) behind the frequency.

7. STATION CAPABILITIES: Mark YES for each mode of operation currently available for SHARES use.

8. STATION HOURS OF OPERATION:

   1 - **24 HOUR**: Mark YES if the station normally operates 24 hours-per-day, seven days-a-week.

   2 - **Part Time**: Mark YES if the station operates on a regularly scheduled but less than 24-hour basis. The time of scheduled operations need not be identified.

   3 - **On Call/Emergency**: Mark YES if the station is activated only on an as-needed or emergency basis.

9. STATION POINT OF CONTACT: Provide the name and complete mailing address of the principal point of contact for the station. This address, which may be different from the station's location, will be used to distribute SHARES information of significance importance to each station, such as Directory changes.

10. COMMENTS: Provide any operational or equipment peculiarities or limitations which may affect the station's capability, or any other condition of which the SHARES Project Office should be aware.

11. SUBMITTING OFFICIAL: Provide the name and telephone number of the person providing the data. In most cases, this should be the person who prepares the data form and can answer questions about the data provided. Include the date the form is prepared.

# APPENDIX F: SHARES ALE ADDRESS CODE REGISTRATION FORM

## SHARES HF RADIO PROGRAM
## ALE ADDRESS CODE REGISTRATION FORM

Agency:

Submitting Official:

Name Phone Date

Unique Identifier Address (UIA): ☐☐☐

Addresses Codes:

☐ listed below ☐ attached as hard copy ☐ attached on-computer disk

1. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
2. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
3. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
4. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
5. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
6. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Address Code Blocks:

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Through

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Comments:

For Office Use

Date Rec'd: Date Entered: Operator:

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