

Regulation  
No. 1130-2-37

16 March 1994

Project Operations  
RADIO COMMUNICATIONS POLICY

1. GENERAL. Radio equipment is a Little Rock District asset that is to be managed as a system to provide efficient operations, personnel security, communication for response to emergency and natural disaster conditions and coordination with other agencies.

2. PURPOSE. The purpose of this policy is to establish uniform guidance for all field offices regarding the selection, acquisition and disposal, use, and maintenance of radio equipment. This policy supersedes the memorandum of 24 May 1993 regarding the use of portable radios. This policy addresses only voice communications. Communications for data and surveys are excluded.

3. RESPONSIBILITIES.

a. Construction-Operations Division Office: Chief, Construction-Operations Division is responsible for providing authorization and funding of radio equipment consistent with operational needs and in accordance with current policies and available funds. The Navigation and Maintenance Branch is responsible for reviewing equipment requests for policy compliance.

b. Information Management Office: Chief, Information Management Office is responsible for providing communication capabilities to all Resident Engineer/Manager Offices and technical recommendations for matching equipment with validated operational needs. The Communications Section is responsible for monitoring and managing the program which includes reviewing requests and providing operational and maintenance guidance.

c. Resident Engineer/Manager Offices: Resident Engineers/Managers are responsible for identifying needs and requesting resources to meet these requirements in a fiscally responsible manner. Supervisors and individual users are responsible for proper installation, use, security, and maintenance of all assigned equipment.

4. CATEGORIES OF RADIO FREQUENCIES. A review of the categories of radio frequencies that LRD personnel commonly use or monitor is presented in Appendix A. Each category requires the use of a separate radio.

5. AVAILABLE EQUIPMENT.

a. A review of current technology indicates that the best interests of people working in the field would be served by the acquisition of multi-frequency radios that incorporate a priority scan mode with an alert tone capability. High-band VHF radios are available that can combine marine, police, and district frequencies. The priority channel shall be the district frequency. The extended range offered by repeater capability allows mutual support between the locks, the District Office, and other Corps personnel in the field. Cellular telephones shall not be used to replace a radio.

b. Selection of equipment for new acquisitions and replacement of old equipment should be made from the equipment listed in Appendix B. Exceptions to this requirement shall be fully justified by the Resident Engineer/Manager.

c. The Information Management Office will review and update Appendix B annually.

6. PROCEDURES FOR ACQUISITION AND DISPOSAL OF EQUIPMENT.

a. Preliminary Coordination: Resident Offices should coordinate with the Communications Section, CESWL-IM-IC, to investigate the availability and applicability of new technology to upgrade their communications capability. The need for communicating with law enforcement and other agencies should be discussed to ascertain authorization letter requirements. The use of law enforcement and other agency frequencies must be authorized, in writing, by each specific agency.

b. Request Memorandums: The documentation and procedures to authorize, procure, and justify requests for new and replacement equipment, requests to transfer equipment from one Resident Office to another, and to request disposal of equipment are provided in SWLR 1130-2-34, CON-OPS DIV SOP 93-01 (COSOP 93-01). All requests for radio communications equipment should be addressed THRU Chief, Con-Ops Div; FOR Chief, IMO; with a copy furnished, CF: CESWL-IM-IC (w/encls). In addition to the documentation and justification required by COSOP 93-01, requests for replacement radios shall include the call signs, serial numbers, and bar codes of radios to be replaced and shall be annotated on the SWL Form 421-R. A copy of SWL Form 421-R is shown in Appendix C. All requests must be accompanied by your organization code, charge number, and the affected Property

Account Numbers. Also, include letters of authorization from law enforcement agencies and others for use of their frequencies.

7. OPERATIONAL RESPONSIBILITIES.

a. All employees are responsible for monitoring the District radio frequency. Assurance that an emergency radio call will be answered depends on continuous monitoring of District radios.

b. The Resident Engineer/Manager shall designate personnel to carry portable radios. Before beginning work in a remote area, employees should perform a radio check with another station to ensure adequacy of communications. A call-back system should be established when working outside radio range.

c. The Resident Engineer/Manager should establish a plan for work groups to have emergency communications.

8. REMOVALS, INSTALLATIONS, REPAIRS and MAINTENANCE.

a. General: Local contractors may be contacted directly for radio removals, installations, repairs, and maintenance. It is not necessary to call the IMO Communications Center before calling contractors for these services.

(1) Parts and accessories for radios may be purchased from local contractors if available.

(2) All radio removals, installations, repairs, and maintenance will be performed by qualified technicians.

(3) No work on radios will be performed without completing SWL Form 407. A copy of SWL Form 407 is shown in Appendix C. All removals, installations, repairs, and maintenance of all radios (bases, mobiles, portables, and repeaters) will be documented by completing each item of SWL Form 407, Equipment Trouble Report and Maintenance Record, by the contractor at the time of work. This form will then be sent to the Communications Section by the Corps field office.

b. Removals:

(1) All items which were a part of the original radio installation will be carefully removed intact from the vehicle and reused in the next installation unless deteriorated by age, wear, or previous damage. Any items damaged by the contractor in removal will be replaced at no cost to the Government.

(2) All chassis/body holes created by the original radio installation will be plugged with proper hardware.

(3) For radios removed for disposal, transmit/receive capability must be eliminated by either removing the transmit/receive crystals or de-programming the synthesized transmit/receive frequencies.

(a) For crystal controlled radios, the crystals shall be removed by the contractor and returned to the Resident Engineer/Manager, and the contractor shall put a tag on the radio stating "Crystals have been removed." The Resident Engineer/Manager shall furnish all removed crystals to the Communications Section for disposal.

(b) For radios with synthesized frequencies, the programmed frequencies shall be erased/deleted by the contractor, and the contractor shall put a tag on the radio stating "Programmed Frequencies have been erased."

c. Installations:

(1) All hardware inside the vehicle will be mounted so that they will be easily accessible for the operator and not be a hazard or inconvenience to the operator or passenger.

(2) To allow incoming calls to be monitored with the ignition key out of the switch, the receiver green lead should be wired directly to the vehicle battery.

(3) For mobile units, ensure that the antenna is installed in the center of the vehicle cab/roof (not on a fender or clamped to a trunk lid).

(4) Upon completion of an installation, a complete preventative maintenance check will be performed and a radio check will be conducted with the field office base.

d. Repairs: Upon completion of work for each radio repaired, a complete preventative maintenance check will be performed and a radio check will be conducted with the field office base.

e. Maintenance:

(1) Maintenance schedules for the newer equipment listed in Appendix B should be coordinated with the Communications

Section, CESWL-IM-IC, to obtain the work by the most economical means.

(2) Equipment styles older than those listed in Appendix B require regular maintenance. A preventative maintenance check should be performed on each radio at least once per year. The following checks, and if necessary, adjustments to obtain proper readings will be performed and documented on SWL Form 407 by the contractor and mailed to CESWL-IM-IC by the field office:

- transmitter power output
- reflected power
- receiver sensitivity
- transmitter modulation deviation (including PL tones)
- transmit frequency
- receiver frequency
- PL tone frequency

(a) Conduct a physical inspection to ensure all fuses, cabling, antennas, and mounting hardware are secure and in good condition.

(b) Batteries for portable radios will be checked with a battery tester that properly loads the battery under test.

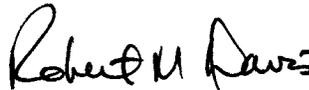
(c) Portable radio Automatic Drive Levels will be checked and adjusted if necessary.

(d) Upon completion of work for each radio, a radio check will be conducted with the field office base.

9. Advertisement of requirements. No advertisement to industry required.

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1. App A CATEGORIES OF RADIO FREQUENCIES
2. App B AVAILABLE EQUIPMENT
3. App C FORMS

  
ROBERT M. DAVIS  
LTC, Corps of Engineers  
Deputy District Commander

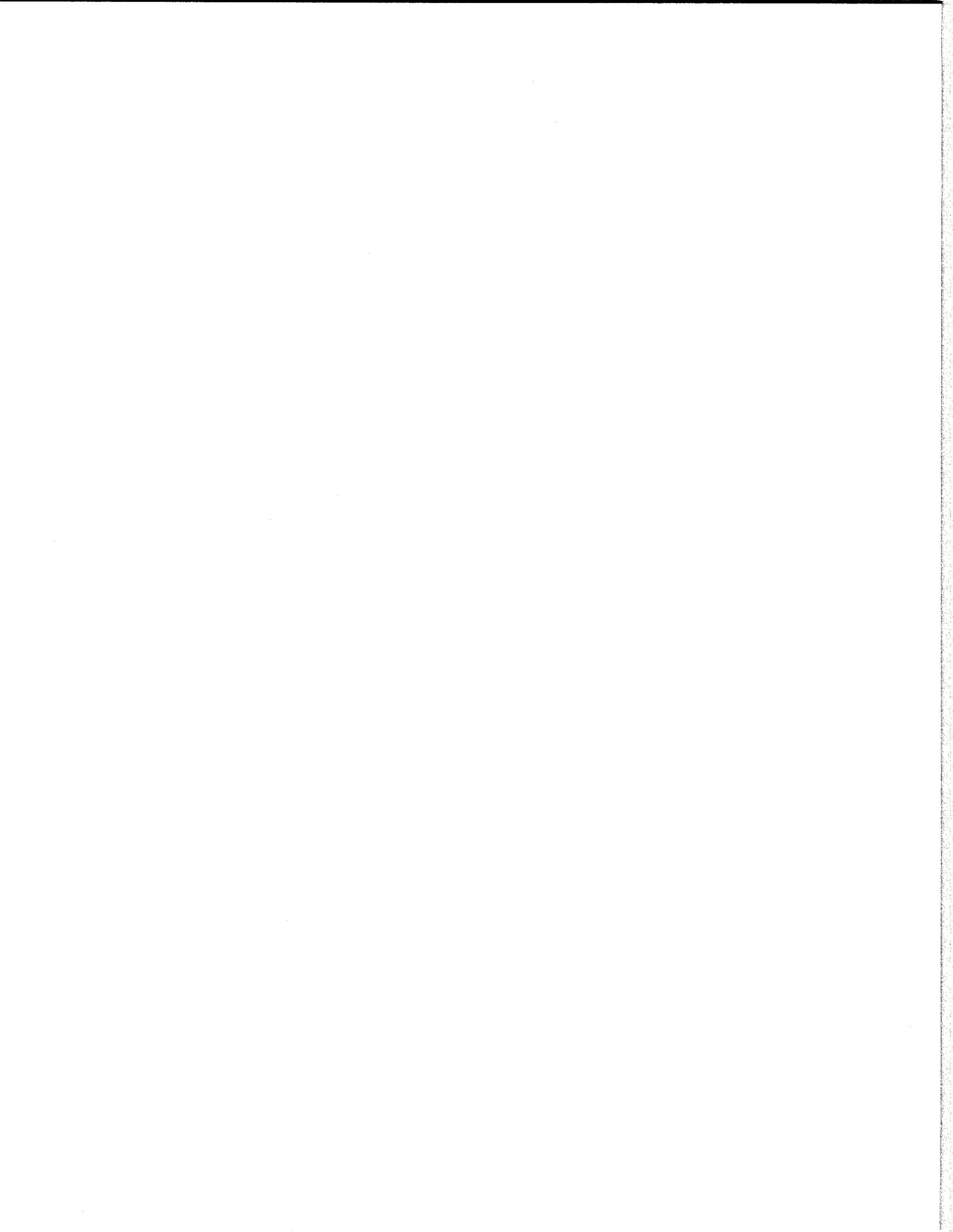
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**DISTRIBUTION:**

Chief, Construction Operations Division  
Chief, Communications Section  
Chief, Emergency Management Branch  
Chief, Information Management Office  
Chief, Natural Resources Management Branch  
Chief, Navigation and Maintenance Branch  
Resident Manager, Beaver Resident Office  
Resident Engineer, Clearwater Resident Office  
Resident Engineer, Greers Ferry Resident Office  
Resident Engineer, Little Rock Construction Resident Office  
Resident Manager, Millwood-Tri Lakes Resident Office  
Resident Engineer, Mountain Home Resident Office  
Resident Manager, Nimrod-Blue Mountain Resident Office  
Resident Engineer, Pine Bluff Resident Office  
Resident Engineer, Russellville Resident Office  
Resident Engineer, Table Rock Resident Office  
Library  
Records Manager

APPENDIX A  
CATEGORIES OF RADIO FREQUENCIES

1. High-Band VHF. (150-172 Mhz) This band of frequencies is used by a large number of public agencies. LRD usage includes:
  - a. Fourteen Little Rock District channels.
  - b. Fifty-seven Marine channels for conducting business in support of commercial navigation on the Arkansas River below Catoosa, Oklahoma and on the White River below Batesville, Arkansas.
  - c. Several local police and emergency service channels that require written authorization from each agency for use of these channels.
  - d. Eight weather information channels (receive only).
2. Low-Band VHF. (35-45 Mhz) This band of frequencies is considered obsolete, but it is still used in some areas by local police (Low-Band-Police). Written authorization from that local Police Department is required for your use.
3. UHF-Police. (400, 800, or 900 Mhz bands) These frequency bands are used by the State Police, local Police, and various emergency services. Special permission and frequency assignments from the agency are required (each band requires the use of a separate radio).
4. Cellular Telephones. Although a cellular telephone is technically a radio device, assignment of frequencies and call-signs are accomplished by the vendor through a cellular telephone number.



**APPENDIX B**  
**AVAILABLE EQUIPMENT**

**1. Base Stations.**

a. Equipment similar to the "Motorola Spectra Desktop Station" has multiple (99) High-Band VHF channels, 50 watt transmit power, repeater activation capability, priority channel scan, and multiple remote control features. Cost is approximately \$3,000. This unit is recommended for use in Resident Offices with remote equipment to various section offices within the building.

b. Equipment similar to the "Motorola DeskTrac Base" has 16 High-Band VHF channels, 45 watt transmit power, repeater activation capability, priority channel scan, and "telephone patch" capability. Cost is approximately \$1,300. Recommended where the remote control feature is not required (locks, and project offices).

c. Equipment similar to the "Motorola Maxtrac 300 with power supply and desk mike" has 16 High-Band VHF channels, 45 watts transmit power, repeater activation capability, and priority channel scan. Cost is approximately \$600. Recommended for use by park attendants in fee shelters.

d. Equipment similar to the "Raytheon, Ray 90" marine radio has all marine channels, 25 watt transmit power, priority scan, hailing and PA options, and intercom. Cost is approximately \$500. This radio can be configured as a base station with up to four remotes. Remotes cost approximately \$350 each. This unit shall be the standard marine radio for use at LRD locks on the Arkansas River. Remote equipment should be located in the upstream and downstream control shelters.

e. Equipment similar to the "Raytheon, Ray 80" is used as a receiver only. Cost is approximately \$450. FCC Regulations require that all locks have a second receiver connected to the outside PA system to monitor channel 16 of the marine band at all times.

**2. Mobile Stations.**

a. Equipment similar to the "Motorola Spectra mobile radio" has multiple (99) High-Band VHF channels, 110 watt transmit power, repeater activation capability, priority channel scan, and

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displays "channel labels." An electronic siren and PA option is available (100 watts audio). Cost ranges from approximately \$1,500 to \$2,500 depending on options selected. This unit is recommended for key personnel and rangers in locations that require a high powered transmitter. It is also recommended, with minimum options, as a "District Radio" for GSA vehicles that may require a high power transmitter.

b. Equipment similar to the "Motorola Maxtrac 300 mobile radio" has 16 High-Band VHF channels, 45 watts transmit power, repeater activation capability, and priority channel scan. Cost is approximately \$500. Recommended for most rangers (with separate siren and PA), maintenance crews, and project vehicles.

c. Equipment similar to the "Motorola Maxtrac Police Mobile Radio" can be ordered for a specific UHF Police Band (400, 800, or 900 Police Band). This unit has 40 watts transmit power. Cost is approximately \$550. Recommended for vehicles that require a UHF Police radio.

### 3. Portables.

a. Equipment similar to the "Motorola MT-1000 Handy-Talkie" has multiple (99) High-Band VHF channels, 5 watts transmit power, repeater activation capability, priority channel scan, top viewing LED display, and can be ordered with 'alert tone' capability. Cost is approximately \$900. This unit is the standard for LRD portable radios.

b. Equipment similar to the "STX-800" is used to meet the security requirements of the Arkansas State Police radio network on the 800 UHF Police Band and has 5 watts transmit power. Cost is approximately \$2,050. This unit is recommended for personnel who interact with the State Police while outside a vehicle.

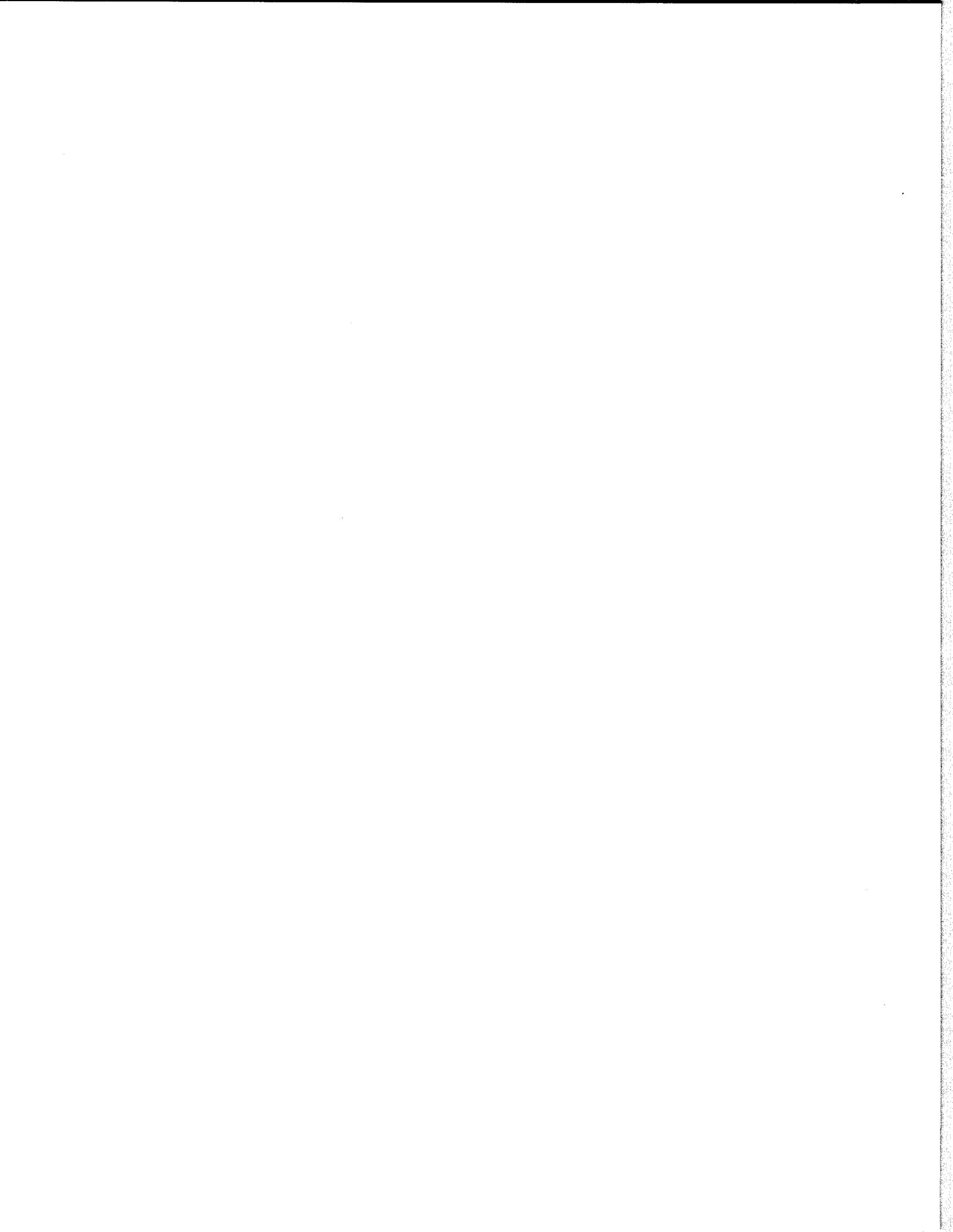
### 4. Repeaters.

a. Equipment similar to the "Motorola DeskTrac Repeater" is programmed to transmit on a specific High-Band VHF channel which has, within itself, repeater activation capability. This unit has 25 watts transmit power. Cost is approximately \$2,300. Norrell Lock and Dam and David D. Terry Lock and Dam have been identified as locations where the use of this unit, or similar equipment, is required for reliable extended range communication with the "Motorola MT-1000" 5 watt portable.

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b. IMO will investigate the concept of installing localized area repeater towers to enhance emergency communications with portables on District frequencies.

5. Cellular Telephones. IMO has units which may be checked out on temporary loan. Cost to your charge number varies from approximately \$0.30 to \$0.80 per minute of air time plus long distance charges.



<b>PROPERTY DISPOSAL REPORT</b> (See Condition Code Classification on Reverse Side)		DISTRICT OR OFFICE					DATE	
		RESPONSIBLE EMPLOYEE AND LOCATION						
PROPERTY ACCOUNT NO.		RESPONSIBLE EMPLOYEE'S SIGNATURE						
ARTICLES	COST ACCT	UNIT	QUAN.	ORIGINAL UNIT COST	TOTAL COST	CONDITION	BARCODE	
IS PROPERTY BEING REPLACED? <input type="checkbox"/> YES <input type="checkbox"/> NO LIST REPLACEMENT REQUISITION # BELOW:		DATE		INSPECTOR (SIGNATURE)				
This item is in excess to the needs of this office. Recommend to be turned in to Account 500 with ENG Form 4900 for disposal thru proper channels in accordance with ER 700-1-1.		DATE		DISPOSAL OFFICER (SIGNATURE)				
		DATE		DISTRICT COMMANDER (SIGNATURE)				
<input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED								

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**SUPPLY CONDITION CODES**

<i>Code</i>	<i>Title</i>	<i>Definition</i>
A	Serviceable (Issuable Without Qualification)	New, used, repaired, or reconditioned material which is serviceable and issuable to all customers without limitation or restriction. Includes material with more than 6 months shelf life remaining.
B	Serviceable (Issuable with Qualification)	New, used, repaired, or reconditioned material which is serviceable and issuable for its intended purpose but which is restricted from issue to specific units, activities, or geographical areas by reason of its limited usefulness or short service life expectancy. Includes material with 3 through 6 months shelf life remaining.
C	Serviceable (Priority Issue)	Items which are serviceable and issuable to selected customers, but which must be issued before Condition A and B material to avoid loss as a usable asset. Includes material with less than 3 months shelf life remaining.
D	Serviceable (Test/Modification)	Serviceable material which requires test, alteration, modification, conversion or disassembly. (This does not include items which must be inspected or tested immediately prior to issue.)
E	Unserviceable (Limited Restoration)	Material which involves only limited expense or effort to restore to serviceable condition and which is accomplished in the storage activity where the stock is located.
F	Unserviceable (Reparable)	Economically reparable material which requires repair, overhaul, or reconditioning (includes reparable items which are radioactively contaminated).
G	Unserviceable (Incomplete)	Material requiring additional parts or components to complete the end item prior to issue.
H	Unserviceable (Condemned)	Material which has been determined to be unserviceable and does not meet repair criteria (includes condemned items which are radioactively contaminated).
S	Unserviceable (Scrap)	Material that has no value except for its basic material content. No stock will be recorded as on hand in Condition Code S. This code is used only on transactions involving shipments to DPDOs. Material will not be transferred to Condition Code S prior to turn in to PDOs if material is recorded in Condition Code A through H at the time material is determined excess. Material identified by NSN will not be identified by this Condition Code.

**DISPOSAL CONDITION CODES**

<i>Code</i>	<i>Title</i>	<i>Definition</i>
1	Unused-good	Unused property that is usable without repairs and identical or interchangeable with new items from normal supply source.
2	Unused-fair	Unused property that is usable without repairs, but is deteriorated or damaged to the extent that utility is somewhat impaired.
3	Unused-poor	Unused property that is usable without repairs, but is considerably deteriorated or damaged. Enough utility remains to classify the property better than salvage.
4	Used-good	Used property that is usable without repairs and most of its useful life remains.
5	Used-fair	Used property that is usable without repairs, but is somewhat worn or deteriorated and may soon require repairs.
6	Used-poor	Used property that may be used without repairs, but is considerably worn or deteriorated to the degree that remaining utility is limited or major repairs will soon be required.
7	Repairs required-good	Required repairs are minor and should not exceed 15% of original acquisition cost.
8	Repairs required-fair	Required repairs are considerable and are estimated to range from 16% to 40% of original acquisition cost.
9	Repairs required-poor	Required repairs are major because the property is badly damaged, worn, or deteriorated, and are estimated to range from 41% to 65% of original acquisition cost.
X	Salvage	Property has some value in excess of its basic material content, but repair or rehabilitation to use for the originally intended purpose is clearly impractical. Repair for any use would exceed 65% of the original acquisition cost.
S	Scrap	Material that has no value except for its basic material content.

**DISPOSITION SYMBOLS**

A	Abandon	Ri	Reissue
C	Circularize	S-D	Sell or Donate
DE	Destroy	TI	Trade-In