BY ORDER OF THE COMMANDER
49TH FIGHTER WING

HOLLOMAN AFB INSTRUCTION 33-103

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Communications and Information

LAND MOBILE RADIO (LMR) SYSTEMS MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NOTICE: This publication is available digitally.

OPR: 49 CS/SCML (George O. Royce)

Certified by: 49 CS/CC
(Maj Armand D. Boudreau, Jr.)

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This publication implements Air Force Policy Directive (AFPD) 33-1, *Command, Control, Communications, and Computer (C4) Systems*. This instruction establishes the Holloman AFB Land Mobile Radio (LMR) management program and prescribes procedures and responsibilities for its operation. It references AFI 33-106, *Land Mobile Radio (LMR) Systems Management*.

SUMMARY OF REVISIONS

Changed from a regulation to an instruction and from the 700 series to the 33 series. Updates general text to conform to AFI 33-106, and eliminates reference to contracted LMR maintenance.

1. General. An LMR system is made up of radio communications nets, each with a specific mission. Each net is a group of radios linked by one or more frequencies. Excluded from LMR systems are fixed radio-alarm monitoring systems and low power systems as defined in AFI 33-118, *Radio Frequency Spectrum Management*. For definition of terms, see **Attachment 1**.

2. Responsibilities:

2.1. LMR Systems Management, 49 CS/SCML, will:

2.1.1. Manage Holloman AFB LMR systems.

2.1.2. Prepare a base instruction IAW AFI 33-106, to accommodate local base situations.

2.1.3. Designate a location for turning in and picking up LMR equipment requiring maintenance. Establish local procedures to request maintenance services.

2.1.4. Prepare and maintain a continuity folder/book, including examples of forms used locally.

2.1.5. Review requests for LMR assets before submitting them to the base Command, Control, Communications and Computer Systems Officer (CSO) and ensure:

2.1.5.1. Requests are capable of satisfying needs.

2.1.5.2. Compatibility with existing equipment is maintained.

2.1.5.3. Frequencies requested are authorized and compatible with items in use.

2.1.6. Train newly assigned net managers.

2.1.7. Prepare budget requirements for LMR maintenance.

2.1.8. Maintain a database of all LMR assets assigned to Holloman AFB.

2.1.9. Schedule preventive maintenance inspections (PMI's) on fixed LMR base stations and repeaters to ensure equipment performance is within specifications.

2.1.10. Serve as net manager for the base paging network.

2.1.11. Maintain net and systems diagrams showing locations of fixed equipment and any type of interfacing with other nets. Diagrams are to be kept in the net folder.

2.1.12. Coordinate with net managers to inspect newly arrived equipment before it is placed into operation and obtain warranty information on equipment.

2.1.13. Ensure condemned equipment has been demilitarized and assist the net manager in preparing proper documentation for turn in to supply.

2.1.14. Prepare documentation on defective equipment items due to equipment abuse for possible Report of Survey actions.

2.1.15. Ensure Intrinsically Safe radios are inspected as required.

2.1.16. Coordinate the removal, relocation, or installation of fixed and mobile LMR equipment.

2.1.17. Advise base and unit contingency planners to ensure deployment plans consider LMR usage, maintenance, frequency authorization, and compatibility.

2.2. LMR net managers or alternate will:

2.2.1. Be appointed, in writing (IAW **Attachment 2**), by their unit commander or designated representative to serve as a central point of contact within the organization to conduct business with the LMR Systems Management office, including LMR malfunctions, purchases, etc. Unit commanders will be responsible to ensure that replacement net managers are appointed prior to current personnel being relieved of their duties, maintaining continuity within their units. The net manager or alternate will be responsible for any actions involving their net. Personnel other than the net manager may conduct business with the LMR Systems Management work center if coordinated in advance.

2.2.2. Ensure all LMR equipment is properly used and all excess LMR equipment is promptly turned in to base supply after coordination with the LMR systems manager.

2.2.3. Prepare, coordinate, and send requirements for new LMR equipment to 49 CS/SCX for verification and presentation to the CSO. Ensure that LMR equipment to be ordered on AF Form 9, **Request for Purchase**, through the base contracting office has necessary CSO approval.

2.2.4. Prepare and coordinate documentation for turn-in or transfer of LMR equipment. All actions will be coordinated with the LMR Systems Management office prior to forwarding to 49th Supply Squadron or 49th Medical Group Medical Equipment Management Office (MEMO).

2.2.5. Ensure the LMR systems manager has inspected each new item before it is placed in service.

2.2.6. Promptly report all lost or damaged equipment to the appropriate agencies and the LMR systems manager. If reports of survey or cash collection vouchers are required, prepare and provide a copy to the LMR systems manager.

2.2.7. Assist users to ensure that all LMR equipment is accounted for. Unrecorded or unauthorized equipment will be reported to the LMR systems manager. LMR equipment not listed in the LMR Tracking and Report System (TRS) will not be maintained by LMR maintenance.

2.2.8. Ensure sufficient batteries, antennas, battery chargers, mobile harnesses, microphones, mounting brackets, and other accessories are available for maximum use of assets. These items are obtained through normal supply channels. Information needed to order these items can be obtained from the LMR systems manager.

2.2.9. Ensure that all malfunctions of base stations, remote control units, and other fixed LMR equipment are promptly reported to the LMR systems management office and provide assistance to maintenance personnel if required. The net manager must verify the problem exists prior to reporting it to maintenance and must provide the equipment serial number and an accurate description of the malfunction to open a work order against the equipment.

2.2.10. Deliver malfunctioning radios, pagers and other items of equipment to 49 CS/SCML, Building 1099, during customer service hours (0730-1200, Tuesday and Thursday). Prepare a work order and/or other applicable paperwork for each item delivered to the central repair point. Forms and samples are available at Building 1099. Installations and/or removals must be coordinated in advance. Units should not hold equipment for turn-in until a quantity needs maintenance (batch processing). Operator maintenance is NOT AUTHORIZED and user attempts to install, remove, repair or tamper in any way with LMR equipment may void warranty responsibilities and/or result in pecuniary liability to the individual.

2.2.11. Complete an annual inventory of all LMR equipment as directed by the LMR systems manager. Send a copy to LMR systems management with all changes and corrections. It is the unit's responsibility to initiate actions to reconcile changes or corrections with LMR systems management.

2.2.12. Report frequency requirements to the base frequency manager (49 CS/SCMY) and the LMR systems manager.

2.2.13. Establish a customer education and training program for all operators of LMR equipment and include training on operating procedures, safety hazards, spectrum interference resolution (SIR), and information security (INFOSEC).

2.2.14. Immediately report spectrum interference incidents in accordance with AFI 10-707, *Spectrum Interference Resolution Program*, for possible SIR reporting.

2.2.15. Perform and document inspection of intrinsically safe (IS) radios.

2.2.16. Perform immediate operational checks of all LMR equipment before turning equipment in and after picking equipment up from maintenance. Report discrepancies to the LMR systems manager.

2.2.17. Initiate LMR equipment replacement action when necessary.

2.2.18. Establish written procedures for loading data encryption standard (DES) or Type 1 (Fascinator) codes in radios requiring secure operation. Ensure all radio operators are aware of proper use and safeguarding of DES/Fascinator keyed equipment.

2.2.19. Coordinate with local COMSEC custodian to establish keying requirements to support DES/Fascinator equipped LMR nets.

2.2.20. Maintain net and system diagrams showing interfaces with other systems and control centers, location of base stations, repeaters and coding devices, and operational ties to other nets. Provide a copy of each net diagram to the LMR systems manager.

2.2.21. Maintain a net folder IAW AFMAN 37-139, *Records Disposition Schedule*, with the following information:

2.2.21.1. Tab 1. Letter of Appointment. Copies of frequency authorization letters.

2.2.21.2. Tab 2. Net diagrams. Area Coverage map.

2.2.21.3. Tab 3. Current inventory. Damaged equipment letters. Reports of survey. The 5-year replacement plan.

2.2.21.4. Tab 4. Special projects.

2.2.21.5. Tab 5. Correspondence.

2.2.21.6. Tab 6. Individual record for each net asset.

2.2.22. Ensure rechargeable (NiCad) batteries are replaced as needed. Batteries should be purchased in bulk quantities, when possible, to reduce costs. When batteries are no longer serviceable (when they will not hold a proper charge and re-conditioning will not restore them to usable levels), it is the net manager's responsibility to ensure that they are disposed of properly and to purchase replacements.

2.3. The 49 SUPS and 49 MEDGP/MEMO will:

2.3.1. Ensure proper coordination has been made with the base CSO or his/her designated representative when processing requests for new or replacement equipment and turn-ins of LMR equipment.

2.3.2. Advise the LMR systems manager when new equipment is received to permit pre-inspection before issue to the using organization custodian.

2.4. The Comptroller Division (49 CPTS) will:

2.4.1. Provide administrative guidance and assistance to users and custodians in preparing Reports of Survey for lost or damaged LMR equipment.

2.4.2. Certify funds availability, cite accounting classification and forward purchase requests to the base contracting officer.

2.4.3. Upon request, advise 49 SUPS, 49 MEDGP/MEMO, the LMR systems manager or base contracting officer of the availability of funds to support LMR equipment requirements.

3. Processing Requirements:

3.1. Frequency Assignments - the allowance for an LMR network does not include frequency assignment. Frequencies will be assigned according to AFI 33-118 and must be assigned before purchasing radios requiring a new frequency. Organizations requiring new LMR nets will contact the base frequency manager (49 CS/SCMY) before submitting a CSRD or AF Form 601, **Equipment Action Request**, for LMRs. Frequencies will be shared, when possible.

3.2. The net manager will submit requirements through the LMR systems manager. An AF Form 3215, **C4 Systems Requirement Document**, and AF Form 601/AF Form 9 will be used for upgrades, new requirements, and replacement requirements not previously validated in the base 5 year replacement program. Only an AF Form 601/AF Form 9 is required for replacement requirements that have been previously validated in the 5-year replacement plan. The net manager, or the equipment custodian through the net manager, initiates the procurement cycle by submitting one or more of the following documents:

3.2.1. DD Form 1348-6, **DoD Single Line Item Requisition System Document**, used to ensure sufficient data is available for base supply/contracting to procure proper LMR equipment and supplies.

3.2.2. AF Form 9, used to purchase LMR equipment directly from the vendor through the base contracting squadron.

3.2.3. AF Form 601, used to purchase LMR equipment through the standard base supply system (SBSS).

3.2.4. AF Form 2005, **Issue/Turn-in Request**, used for requesting expendable equipment or supply items.

3.2.5. AF Form 3215.

3.3. The CSO or designated representative will evaluate each request for standardization, technical adequacy and compatibility, and cost effectiveness. All new requirements will be engineered to fulfill the requirements stated on the AF Form 3215. If the requirement will be approved at base level, engineering is the responsibility of the base LMR systems manager. Requirements to be validated at base level and forwarded to the host MAJCOM or higher will include preliminary engineering documentation. This documentation should include such things as antenna gain, transmit and receive frequency, RF power output, site elevation above mean sea level (MSL), antenna height above ground (AGL), and power and frequency of antennas to have co-located with other LMR equipment.

3.4. The LMR Systems Manager will continually analyze local LMR requirements and ensure local procedures restrict acquisition of LMR equipment to mission-essential requirements. No equipment will be procured or added to existing LMR nets without proper need and justification. The base CSO will validate, approve, or disapprove LMR requirements.

3.4.1. Replacement requirements are approved by the CSO. The net manager, or equipment custodian through the net manager, will process an AF Form 601/AF Form 9 to the CSO and the base LMR systems manager, before submitting to the host base supply activity. The requiring unit must

provide funding for LMR assets. The unit resource advisor will place a funds availability statement on the AF Form 601/AF Form 9 prior to submitting to the LMR systems manager.

3.4.2. All new or special-purpose LMR net requirements will be costed by the LMR net manager before submission of a CSRD.

3.4.3. The 49 Supply Squadron Demand Processing unit or 49 MEDGP/MEMO will verify and process the request. Demand Processing/MEMO must ensure TA, BOI, and CSO approval before initiating the requisition cycle.

3.4.4. The base contracting office will process requests from supply for LMR equipment and supplies based on priorities established during the supply process. Contracting personnel and the LMR systems manager will make sure all frequency sensitive items are compatible with the appropriate net frequency, including sub-audible tone coded squelch and selective call codes, and will complete cost analysis, cost comparison, and technical adequacy studies to make sure the equipment meets mission parameters.

3.4.5. The base contracting office will verify CSO approval has been accomplished prior to processing AF Forms 9 for LMR equipment.

4. Operations:

4.1. LMR nets will be operated in accordance with Allied Communications Publication (ACP) 125, *Communications Instructions-Telephone Procedures*. Transmission should always be brief, concise and accurate. Operating procedures in ACP 125 and AFKAO-1, *USAF Voice Call-Sign Instructions*, will be used. The net manager assigned by the using net will be responsible for net control operations.

4.2. Net impairment can be caused by equipment failure. Report problems to the net manager or LMR systems manager for diagnosis prior to SIR reporting.

4.3. LMRs are extremely vulnerable to interception by third parties. All users must follow proper INFOSEC techniques. Never discuss classified information on any LMR other than those using Type 1 encryption. Some of our nets require protection of information by DES. The DES equipment will be used to protect sensitive but unclassified, national security-related information. It cannot be used to protect classified transmissions.

4.4. LMRs, other than intrinsically safe LMRs, should not be used in or near hazardous operating areas, such as aircraft alert areas; munitions storage and handling areas; petroleum, oil, and lubricants (POL) refueling zones; and other areas outlined in AFMAN 91-201, *Explosive Safety Standards*. Only intrinsically safe certified, operated, maintained, and marked LMRs will be operated within 50 feet of fuel or refuel environments.

4.5. Pagers may be authorized for personnel with extensive standby duty. Pagers will not be authorized when standby duty is infrequent or an immediate response is not required. Approval for pagers will be based on costs versus benefits. Example benefits include the degree to which pagers will reduce the number of two way radios, telephone toll costs, transportation time and costs, or increase the morale of personnel with extensive standby duty or readiness posture.

4.6. A Citizens Band radio is a citizen's service and should not be used to conduct official government business. The use of Citizens Band radio by the Air Force is generally not authorized.

5. Restoration Priorities:

5.1. Restoration priorities for LMR equipment are:

5.1.1. Base stations.

5.1.2. Repeaters.

5.1.3. Remote control units.

5.1.4. Mobile radios.

5.1.5. Portable radios.

5.1.6. Pagers.

5.2. In the event of multiple network outages, the following net listing will be used to determine priorities.

5.2.1. CC

5.2.2. FIG

5.2.3. MED

5.2.4. F/C

5.2.5. EXP

5.2.6. S/P

5.2.7. SAT

5.2.8. POL

5.2.9. RAMP

5.2.10. EOD

5.2.11. COMM

5.2.12. IEO

5.2.13. SUP

5.2.14. DIS

5.2.15. MOBSS

5.2.16. TTW

5.2.17. LGX

5.2.18. TAXI

5.2.19. OSI

5.2.20. OSC

5.2.21. WEG

5.2.22. TST

5.2.23. DOA

5.2.24. MAX

5.2.25. RAT

5.2.26. DOD

5.2.27. DOI

5.2.28. AMR

5.2.29. BAL

5.2.30. INT

5.2.31. Page

5.3. Portable radios, mobile radios, and pagers will not be considered as mission impact outages. It is the responsibility of each net manager to ensure that enough assets are on hand to sustain the mission while equipment is at LMR maintenance for routine repair. LMR systems management does not stock equipment for loan while the unit's equipment is in for maintenance.

DENNIS R. LARSEN, Brig Gen, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

Terms

Ancillary Equipment—External components of an LMR, such as microphones, speakers, battery chargers, antennas, key variable loaders, etc.

Base Station—A fixed piece of equipment capable of two-way communications to selectively or broadcast call one or more users. It may be operated locally or from a distant location by a remote control unit.

Base Support Radio (BSR)—Pagers and two-way radios used at a single location and not intended for deployment.

Central Base Paging System—A common-user, one-way radio net serving all organizations on an installation.

Citizen Band (CB) Radio—A radio operating on a citizen band frequency not authorized for military use.

Combat Deployable Radio (CDR)—An LMR used for combat related tasks, contingencies, or deployments. CDR systems are tunable, and can be voice-privacy (DES) or secure-voice (FASCINATOR) capable.

Command, Control, Communications and Computer Systems Officer (CSO)—The individual responsible to the 49 FW Commander for all matters relating to LMR Systems management.

Communications-Computer Systems Requirements Document (CSRD)—A document (AF Form 3215) which identifies, describes, and justifies the need for communications-computer systems facilities, equipment, and services.

Data Encryption Standard (DES, DES-XL)—An encryption feature which provides limited protection from interception for the transmissions of unclassified but sensitive national security related information. Not for dissemination of classified information.

Fascinator—A National Security Agency (NSA) approved Type 1 encryption to provide COMSEC protection to LMR transmissions to pass classified information. Users requiring Type 1 encryption will identify this requirement to LMR Systems Management.

Intrinsically Safe (IS) Radios—Radios that are certified not to release a sufficient amount of thermal energy necessary to cause ignition of a specific flammable or combustible atmospheric mixture in an ignitable concentration.

Land Mobile Radio (LMR)—Systems or equipment used to provide local transfer of information in a frequency modulation medium through the use of portable, mobile, base station and repeater radios and associated equipment.

LMR Systems Manager—The individual responsible to the CSO for implementing and conducting a comprehensive and responsive LMR program.

Mobile Radio—A two-way radio which operates in a vehicular environment and is capable of single or multi-channel capacity.

Monitor, Receiver, or Scanner—A radio receiver capable of monitoring one or more frequencies.

Net Manager—The individual responsible for managing a specific LMR Net in accordance with the policies and procedures established by this and other directives. The LMR Systems Manager is the net manager for the Central Base Pager Net.

Network (Net)—A collection of LMR assets linked by one or more frequencies used to assist coordination of a single function.

Pager—A selective signaled or broadcast call, receive-only radio device.

Portable Radio—A two-way hand-held radio capable of single or multichannel operation.

Remote Control Unit (RCU)—A unit which provides the capability to key the base station from a remote location. It also allows for multiple users, usually called sub-net control locations.

Repeater—A fixed radio with separate transmit and receive frequencies in a special configuration which retransmits all communications entering its receiver.

Table ofAllowance (TA)—TAs prescribe basic allowances for equipment. Part H of TA 660 contains allowances for two-way radios and pagers under HQ ACC and for Holloman AFB. Radios and pagers used in medical treatment facilities are listed in TAs 896, 897 and 903.

Attachment 2

NET MANAGER APPOINTMENT LETTER FORMAT

MEMORANDUM FOR 49CS/SCML

FROM: (Unit Office Symbol and Phone Number)

SUBJECT: LMR Net Manager Appointment

The following individual is appointed primary net manager for the _____ net:

(Signature)_____

Typed Name, Grade and Duty Phone

The following individual(s) is/are appointed alternate net managers:

(Signature)_____

Typed Name, Grade and Duty Phone

(Signature)_____

Typed Name and Grade of Commander or Designated Representative

cc: Individuals