

**BY ORDER OF THE COMMANDER  
AIR EDUCATION AND TRAINING  
COMMAND**



**AIR FORCE INSTRUCTION 33-106  
AIR EDUCATION AND TRAINING COMMAND  
Supplement 1  
9 JULY 1998**

**Communications and Information**

**MANAGING HIGH FREQUENCY RADIOS,  
LAND MOBILE RADIOS, CELLULAR  
TELEPHONES, AND THE MILITARY  
AFFILIATE RADIO SYSTEM**

**"HOLDOVER"**

***"The basic publication has changed; impact on supplemental information is under review by the OPR.  
Users should follow supplemental information that remains unaffected."***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: HQ AETC/SC (Project Office: AETC CSS/SCYC [Ms. J. Carter]) Certified by: AETC CSS/CC (Lt Col L. Meinhardt)  
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**| AFI 33-106, 1 September 1997, is supplemented as follows:**

***SUMMARY OF REVISIONS***

A bar ( | ) in the left margin indicates revised material.

**NOTE:** Submit recommendations to change or improve this supplement to the command LMR functional manager (AETC CSS/SCYC), 61 Main Circle, Suite 3, Randolph AFB TX 78150-4546. Also notify AETC CSS/SCYC of omissions or conflicts with other AFIs.

4.4.1. LMR, cellular, and pager functional management will be provided by AETC CSS/SCYC, Randolph AFB TX.

4.6.4. EAID budget code 9 LMR, pager, and cellular assets (formerly ERRC coded NF3) have been recoded NF1 by base supply. Once the supply deregulation action is complete, these assets will no longer be accountable under the Allowance Standard authorizations or appear on the Allowance Source Code (ASC) Listing. Base CSOs will ensure that all ASC-listed LMR assets are reconciled with the most current LMR Tracking and Reporting System (TRS) database and existing maintenance service contract inventories semiannually.

4.6.4.1. (Added) LMR Maintenance Service Contracts:

4.6.4.1.1. Do not include items such as central base pagers and ancillary equipment, cellular telephones, vehicular chargers, antennas, scanners, public address systems, sirens, or light bars, on the LMR maintenance service contract. These and similar items should only receive maintenance as required. Consider removing all mobile and portable LMR equipment from the maintenance contract. The base contracting office can assist you in setting up an international merchant purchase agreement card (IMPAC) account for these actions. This option will often produce significant cost savings and should be considered whenever possible. The owning unit is responsible for all maintenance costs on their equipment and can be tasked to provide an annual fund cite for these IMPAC account repairs, if desired.

4.6.4.1.2. CSOs should ensure that, where used, maintenance service contracts permit qualified DoD employees to perform LMR equipment installations and removals. Users and customer agencies will not be authorized to perform maintenance on LMR equipment without CSO approval.

4.6.5. Do not record installation, removal, relocation and no-trouble-found work orders as accountable maintenance actions in the Five-Year Replacement Plan.

4.6.10.1. (Added) All requirement documents that identify cellular telephones as the recommended technical solution will be approved by the CSO. This responsibility cannot be delegated to a subordinate.

4.6.12. The economic analysis will, as a minimum, consist of a comparison of equipment purchase prices, cellular airtime charges, and estimated life-cycle costs versus the equivalent estimates of potential alternatives.

4.6.12.1. (Added) The CSO (or designated representative) will keep the original cellular telephone approval document in accordance with procedures outlined in AFMAN 37-139, *Records Disposition Schedule*. If the original requirement document is lost or becomes unreadable, the using agency will prepare a new requirement document and submit it to the CSO. If the recommended technical solution continues to be a cellular telephone, the CSO will approve the requirement and file the new document.

4.7.7. Base LMR managers will not submit any documentation directly to HQ AFCA without the prior knowledge and consent of AETC CSS/SCYC. All requests for exceptions will be routed through AETC CSS/SCYC to HQ AFCA/SYSC/SYXM.

4.7.11.5. The CSO (or designated representative) will retain the original LMR or pager approval document in accordance with procedures outlined in AFMAN 37-139. If the original requirement document is lost or becomes unreadable, the using agency will prepare a new document and submit it to the CSO for approval and filing.

4.7.14. Base LMR managers will ensure that LMR TRS database inventories have been accomplished before performing these LMR TRS backup and MAJCOM export routines.

4.10. The use of TLMR systems is limited to those locations experiencing base-wide integration, interoperability, frequency congestion, and (or) assignment availability problems affecting their overall operational capability. TLMR systems may be established by individual bases or cooperatively with other federal, state or local agencies. Bases within 30 Km (18.6 miles) of an existing trunked LMR system authorized by the National Telecommunications and Information Administration (NTIA) may be required to migrate to one of these systems in order to solve their frequency congestion and (or) assignment availability problems. Affected bases will request access to cooperative systems through AETC CSS/SCYC regarding communicating with the trunked system administrator of the sponsoring agency.

4.10.1. Requirements for TLMR systems cannot be identified for funding locally or through command channels until a TLMR conversion plan has been approved by the Department of Commerce (DOC), NTIA, Interdepartment Radio Advisory Committee (IRAC), and Spectrum Planning Subcommittee (SPS) and frequency assignments have been obtained.

4.10.2. CSOs will ensure the TLMR conversion plan is prepared and forwarded to the command LMR functional manager with a copy of the locally validated requirement document, using the format in **Attachment 10 (Added)**.

4.10.3. (Added) The CSO will submit an annual TLMR usage report through the command LMR functional manager to the SPS. Use the format in **Attachment 11 (Added)**. (**NOTE:** See AFI 33-118/AETC Sup 1, *Radio Frequency Spectrum Management*, for additional information on trunked frequency acquisition procedures.) The reporting requirement in this supplement is exempt from licensing in accordance with AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

4.11.1. AFI 33-111, *Telephone Systems Management*, addresses billing procedures associated with the acquisition and operation of cellular telephones (lease or purchase price, maintenance costs, connection fees, airtime fees, etc.). Airtime fees are considered to be “equivalent charges” for billing purposes. LMR managers should not be appointed telephone control officers (TCO) or be tasked with the validation of billed charges.

6.3.1. The HQ AETC MARS director is the command LMR manager (AETC CSS/SCYC, Randolph AFB TX).

6.3.3. Base LMR managers will serve as installation MARS directors unless the CSO identifies an alternate individual who better suits local requirements. In such cases, the CSO will forward a copy of the appointment memorandum to AETC CSS/SCYC.

**Attachment 10 (Added)****TLMR CONVERSION PLAN**

**A10.1. Establishing a Trunking System.** Requests to establish a trunking system will be sent to the command LMR functional manager in the following format:

1. Operating Location:  
(City or other geographical subdivision and state)
2. Equipment Identification:  
(Manufacturer model number and name of equipment)
3. Docket Number of Previous Certification:  
(SPS docket number of the NTIA certification of spectrum support for the equipment)
4. System Overview:
  - a. Radio Crosspatches:  
(Yes/No - If yes, explain.)
  - b. Cross-Band:  
(Yes/No - If yes, explain.)
  - c. Voting:  
(Yes/No - If yes, explain.)
  - d. Number of Repeater Sites:  
(If more than one, explain.)
  - e. Number of Telephone Interconnects:
  - f. Line Diagram:  
(Provide a line diagram representing the system configuration and method of connecting multiple sites.)
  - g. Other:  
(Provide any other system information.)
5. Coverage Information:  
(Provide the following information for each repeater site.)
  - a. Number of Repeaters at Site:

b. Geographical Coordinates:  
(In degrees, minutes, and seconds)

c. Site Elevation:  
(In meters above mean sea level)

d. Antenna Height:  
(In meters above site elevation)

e. Antenna Gain:  
(In dBi)

f. Transmitter Power:  
(In watts)

g. Radius of Operation or Geographical Plot of Required Coverage:  
(In kilometers)

6. Frequency Requirements:

a. Frequency Band:

b. Narrowband Capability: (Yes/No)

c. Number of Channels (Frequency Pairs) Required:

d. Rationale for Number of Channels:

7. System Use:

(Identify each user type [administrative, fire, law enforcement, medical, security, etc.] to be supported by the system and provide the following information for each user type.)

a. Number of Mobiles:

b. Number of Portables:

c. Number of Land Stations:

8. Target Date for System Activation:

9. Frequency Assignments to Be Replaced by this System:

a. Assignments to Be Relinquished: (Provide the existing assigned frequencies, agency serial numbers, and expected relinquishment date.)

b. Assignments to Be Used by the Trunked System: (For each existing frequency assignment that will be incorporated into the trunked system, provide the existing assigned frequencies and agency serial numbers.)

10. Availability of Commercial Services:

a. Commercial SMR or Cellular Services Available: (Yes/No)

b. Justification for Nonuse:

11. Sharing Availability:

a. System Available for Sharing By Other Federal Agencies: (Yes/No)

b. Rationale for Nonavailability:

12. Estimated Initial Cost of the System:

13. Separate System Justification:

(Trunked land mobile systems that are within 30 Km of an existing or planned trunked land mobile system authorized by NTIA, shall be accompanied by a justification that indicates why use of the existing system could not meet agency requirements.) Criteria for selecting a separate system include:

a. Communications services are required in areas where the existing system cannot provide service, its use would not meet mission requirements, would cause unacceptable delays or disruptions, or would cost more than operating a separate system.

b. The existing system cannot provide the type or quality of service required, its use would not meet mission requirements, would cause unacceptable delays or disruptions, or would cost more than operating a separate system.

c. A separate system is required to fill a gap in the existing system, which will be generally used to meet the applicant's requirements.

**A10.2. Additional Channels or Expanding a Previously Certified TLMR System.** Requests for expansion or additional channels for previously certified TLMR systems must also be submitted to the SPS for approval. These requests will be forwarded through the command LMR functional manager in the following format:

1. Operating Location: (City or geographical subdivision and state)

2. Previous Certification Docket Number:

3. Additional Frequency Requirements:
  - a. Number of Additional Channels (Frequency Pairs) Required:
  - b. Rationale for Additional Channels: (such as, channel loading, queuing times, usage reports)
4. Details of the Expansion:
  - a. Additional Repeater Sites: (Provide the information listed in [A10.1](#), paragraphs 5a through 5g, for each additional repeater site.)
  - b. Additional Users: (Provide the information listed in [A10.1](#), paragraphs 7a through 7c, for additional users.)
5. Target Date for Expansion/Additional Channel Activation:
6. Target Date for Expansion/Additional Channel Activation:

**Attachment 11 (Added)****ANNUAL TLMR REPORT**

**A11.1. Instructions.** During the first 5 years of TLMR system operation, an annual report will be submitted to the SPS through the command LMR functional manager. This information will provide the SPS and other NTIA committees with the statistical information necessary for justification of future TLMR system expansions. The report will be prepared in the following format:

1. Operating Location:  
(City or geographical subdivision and state)
2. SPS Docket Number:  
(Certification of spectrum support)
3. Date of Activation:  
(If system is not yet activated, insert the proposed date of activation and provide all applicable frequency assignment serial numbers.)
4. System Information:
  - a. Number of Base Station Locations:
  - b. Number of Frequencies Used:
  - c. Number of Land Stations:
  - d. Number of Mobiles:
  - e. Number of Portables:
  - f. Description of Users: (such as, security, medical, administrative, etc.)
  - g. Number of Base Station Repeaters Equipped for Telephone Interconnect:
5. Data on Busiest Hour:  
(Specify the busiest hour and the timeframe over which the following calculations were made.)
  - a. Number of Dispatch Calls:
  - b. Number of Telephone Calls:
  - c. Average Duration of Dispatch Call:

- d. Average Duration of Telephone Call (if any):
- e. Number of Dispatch Call Buses (if any):
- f. Average Delay for Dispatch Calls (if any):
- 6. Other Federal Agencies Using this System (if any):
- 7. Additional Comments:

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Director of Communications and Information