

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



**AIR FORCE INSTRUCTION 33-106
AIR EDUCATION AND TRAINING COMMAND
Supplement 1
22 JUNE 2004**

Communications and Information

**MANAGING HIGH FREQUENCY RADIOS,
PERSONAL WIRELESS COMMUNICATION
SYSTEMS, AND THE MILITARY AFFILIATE
RADIO SYSTEM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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AFI 33-106, 9 January 2002, is supplemented as follows:

This supplement does not apply to the Air National Guard or the Air Force Reserve Command. Use AF IMT 847, **Recommendation for Change of Publication**, to submit recommendations to change or improve this supplement to the command personal wireless communications system (PWCS) 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 directives.

Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) (available at <https://webrims.amc.af.mil>).

SUMMARY OF REVISIONS

This document was revised due to a complete rewrite of the basic AFI. It has significant changes throughout and must be completely reviewed. Major policy changes include the requirements for alternative tracking of non-TRS-reportable items (paragraph 4.8.4.) and for ensuring medical facilities retain their protected status under the Law of Armed Conflict (paragraph 4.6.9. (Added)).

4.4.1. Command functional management of personal wireless communications systems (PWCS), to include land mobile radios (LMR), will be provided by AETC CSS/SCYC.

4.6.5. Equipment authorization inventory data (EAID) budget code 9 for 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. Each base communications and information systems

officer (CSO) will ensure all ASC-listed LMR assets are reconciled with the most current LMR tracking and reporting software (TRS) database and existing maintenance service contract inventories semiannually. For LMR maintenance service contracts, the CSO will:

4.6.5.1. (Added) 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 contract. These and similar items should only receive maintenance as required.

4.6.5.2. (Added) Consider removing all mobile and portable LMR equipment from the contract because significant cost savings are realized when items receive maintenance only when required. Owning units will be responsible for all equipment maintenance costs that can be managed under a government purchase card (GPC) account. Repair costs can be charged to the account which is paid by using an annual fund site. The base contracting office will help set up a GPC account.

4.6.5.3. (Added) Ensure maintenance service contracts, where used, allow 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.

4.6.6. Do not record installation, removal, relocation, and no-trouble-found work orders as accountable maintenance actions in the PWCS 5-year replacement plan.

4.6.9. (Added) Ensures antennas on medical facilities are not used for command and control activities. This will allow medical facilities to remain noncombatant and retain their protected status under the Law of Armed Conflict.

4.7.2.2.4. The CSO (or designated representative) will retain the original cellular telephone approval document (AF IMT 3215, **IT/NSS Requirements Document**) in accordance with procedures outlined in the Air Force RDS. If the original form is lost or becomes unreadable, the using agency will prepare and send the CSO a new one. If the recommended technical solution continues to be a cellular telephone, the CSO will approve the requirement and file the new form.

4.7.7. The use of trunked LMR (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 kilometers (18.6 miles) of an existing TLMR system that is 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 TLMR system administrator of the sponsoring agency.

4.7.7.1. When the proposed technical solution is a TLMR system, the PWCS manager will help the installation spectrum manager prepare a TLMR conversion plan for new TLMR requirements. The CSO will ensure the TLMR conversion plan is prepared and forwarded to AETC CSS/SCYC with a copy of the locally validated AF IMT 3215. See the plan format in **Attachment 10 (Added)** of this supplement. The PWCS manager will validate and send the TLMR conversion plan to the command spectrum management office (AETC CSS/SCYC) for processing to the Air Force Frequency Management Agency (AFFMA) for review at the national level. 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. **NOTE:** Requests for expansion or

additional channels for a previously certified TLMR system must also be submitted to the SPS for approval. These requests will be forwarded through AETC/CSS/SCYC in the format shown in **Attachment 11 (Added)**.

4.7.7.2. The CSO will submit an annual TLMR usage report to AETC CSS/SCYC in the format shown in **Attachment 11 (Added)**. See AFI 33-118/AETC Sup 1, *Radio Frequency Spectrum Management*, for additional information on TLMR frequency acquisition procedures. **NOTE:** The reporting requirement in this supplement is exempt from licensing in accordance with AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

4.7.10.3. The base PWCS manager will run the command TRS export routines between 1 and 10 January and 1 and 10 July. He or she will provide a copy of this information to AETC CSS/SCYC no later than 11 January and July.

4.7.16. (Added) Does not submit any documentation directly to Headquarters Air Force Communications Agency without the prior knowledge and consent of AETC CSS/SCYC.

4.8.4. A separate copy of the TRS may be maintained to track assets that do not meet the \$500 threshold for maintenance and accountability requirements.

4.9. See AFI 33-111, *Telephone Systems Management*, for 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. Base and wing PWCS managers should not be appointed telephone control officers or be tasked with the validation of billed charges.

4.12.1.3. Provide a copy of annually revalidated non-TRS-reportable PWCS assets to the CSO through the chain of command for record-keeping purposes.

6.3.1. AETC CSS/SCYC is the HQ AETC Military Affiliate Radio System (MARS) Director.

6.4. Each base PWCS manager will serve as the base MARS director unless the CSO identifies an alternate individual who better suits local requirements. In such a case, the CSO will forward a copy of the appointment memorandum to AETC CSS/SCYC.

18.3. AF IMTs 847, **Recommendation for Change of Publication**; and 3215, **IT/NSS Requirements Document**.

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFMAN 37-123, *Management of Records*

Air Force Records Disposition Schedule (RDS)

Abbreviations and Acronyms

ASC—allowance source code

EAID—equipment authorization inventory date

GPC—government purchase card

SPS—spectrum planning subcommittee

Attachment 10 (Added)**FORMAT FOR THE TLMR CONVERSION PLAN**

A10.1. (Added) Establishing a TLMR System. Requests to establish a TLMR system will be sent to the command LMR functional manager in the format shown in **Figure A10.1. (Added)**.

Figure A10.1. (Added) Format for Requesting the Establishment of a TLMR Systems.

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: *(The SPS docket number of the NTIA certification of spectrum support for the equipment)*
4. System overview:
 - a. Radio crosspatches: *(Yes or No. If yes, explain.)*
 - b. Crossband: *(Yes or No. If yes, explain.)*
 - c. Voting: *(Yes or 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 or 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 information below 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 TLMR System: *(For each existing frequency assignment that will be incorporated into the TLMR System, provide the assigned frequency and agency serial number.)*
 - 10. Availability of commercial services:
 - a. Commercial SMR or cellular services available: *(Yes or No)*
 - b. Justification for nonuse:
 - 11. Sharing availability:
 - a. System available for sharing by other federal agencies: *(Yes or No)*
 - b. Rationale for nonavailability:
 - 12. Estimated initial cost of the system:
 - 13. Separate system justification: *(TLMR systems that are within 30 kilometers of an existing or planned TLMR system authorized by NTIA will be accompanied by a justification indicating why use of the existing system could not meet agency requirements.)*
- NOTE:** *A separate system may be justified when:*
- a. *Communications services are required in areas where (1) the existing system cannot provide the type or quality of service necessary and/or (2) the existing system does not meet mission requirements, causes unacceptable delays or disruptions, and/or costs more than operating a separate system.*
 - b. *It is necessary to fill a gap in the existing system and will be generally used to meet the applicant's requirements.*
- 14. War emergency use: *(A statement as to whether the proposed system will be used in war emergency environment.)*

A10.2. (Added) Adding Channels or Expanding a Previously Certified TLMR System. Requests for expansion or additional channels to a previously certified TLMR system must also be submitted to the SPS for approval. These requests will be forwarded through the command LMR functional manager in the format shown in **Figure A10.2. (Added)**.

Figure A10.2. (Added) Format for Requesting Additional Channels for or Expansion of a Previously Certified TLMR System.

- 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: *(For example, channel loading, queuing times, usage reports)*
4. Details of the expansion:
- a. Additional repeater sites: *(Provide the information listed in paragraph A10.1. (Added), items 5a through 5g, for each additional repeater site.)*
- b. Additional users: *(Provide the information listed in paragraph A10.1. (Added), items 7a through 7c, for additional users.)*
5. Target date for expansion or additional channel activation:
6. Estimated cost of the expansion:
7. War emergency use: *(Indicate whether the proposed system will be used in war emergency environment.)*

Attachment 11 (Added)**FORMAT FOR THE ANNUAL TLMR USAGE REPORT**

A11.1. (Added) Instructions for Completing the Report. 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 along with the statistical information necessary for justification of future TLMR system expansions. The report will be prepared in the format shown in **Figure A11.1. (Added)**.

Figure A11.1. (Added) Format for the TLMR Usage Report.

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: *(For example, security, medical, administrative)*
 - 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 busies (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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