

DEPARTMENT OF THE ARMY  
US ARMY MEDICAL DEPARTMENT  
Fort Huachuca, Arizona 85613-7079

MEDDAC Memorandum  
No. 750-3

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Maintenance of Supplies and Equipment  
ELECTRO MAGNETIC INTERFERENCE AND ELECTRO STATIC DISCHARGE  
(EMI/ESD)

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1. HISTORY: This issue publishes a revision of this publication.
  
2. PURPOSE: The purpose of this policy is to provide guidance to Medical Treatment Facility (MTF) personnel on precautions necessary for the prevention of Electro Magnetic Interference and Electro Static Discharge (EMI/ESD) that may adversely affect the safe operation of medical equipment within the facility.
  
3. APPLICABILITY: This policy applies to all elements of the U.S. Army Medical Department Activity (USAMEDDAC), Fort Huachuca, Arizona.
  
4. REFERENCES:
  - 4.1 AR 40-61, Medical Logistics Policies and Procedures.
  - 4.2 TB MED 523, Control of Hazards to Health from Microwave and Radio Frequency.
  - 4.3 TB 385-4, Safety Requirements for Maintenance of Electrical and Electronic Equipment.
  - 4.4 TB 43-0133, Hazard Controls for CECOM Radio Frequency and Optical Radiation.
  - 4.5 MIL-STD-461D, Requirements for the Control of Electromagnetic Interference Emissions and Susceptibility.
  - 4.7 MIL-STD-462D, Measurement of Electromagnetic Interference Characteristics.
  - 4.8 MEDCOM REG 40-42, U. S. Army Medical Command Radiation Safety Program.

## **5. GENERAL:**

**5.1** All visitors and employees are prohibited from operating personally owned radio-frequency transmitting (RF) devices within the vicinity of the Surgical Suites and Recovery Room. RF producing devices include: cellular phones, portable computers (laptops), portable handheld video game devices, walkie-talkies, citizen band radio (CB), very high frequency transceivers (VHF), and ultra high frequency transceivers (UHF).

**5.2** Contractors, vendors, and all outside business personnel will not operate any RF device within the vicinity of Surgical Suites and Recovery Room.

**5.3** All MTF issued transceivers and portable RF transmitters are authorized for use in areas other than those listed in paragraph 5.4. (Note: Computers necessary for the purpose of diagnosing systems may be used to service such systems)

**5.4** The areas most susceptible to EMI/ESD are as follows: Ambulances, Operating Room (OR), Ambulatory Surgical Procedure Unit (ASPU), Same Day Surgery (SDS), Post Anesthesia Care Unit (PACU).

**5.5** Keying (pushing On/Off button) of transceivers (including MEDDAC owned) is prohibited within all areas listed in paragraph 5.4.

**5.6** All departments will coordinate requisitions for purchase of paging systems, LAN transmitters, and RF transmitting devices listed in paragraph 5.1 through Facilities and Equipment Management Branches.

**5.7** Entrances to the ASPU and PACU will be clearly marked with signs prohibiting the use of RF producing devices listed in paragraph 5.1.

**5.8** Annual training in EMI/ESD awareness will be conducted during Annual Training sessions.

## **6. BRANCH RESPONSIBILITIES:**

**6.1** Chief, Facilities will:

**6.1.1** Post signs at the entrances to ASPU and PACU prohibiting the use of items listed in paragraph 5.1.

**6.1.2** Coordinate with Chief, Equipment Management Branch on any new installations of RF producing devices, LAN transmitters, paging systems, and routing of wiring for possible interference with medical equipment.

**6.1.3** Ensure that any new purchase of RF transmitting equipment incorporates digital transmission above the 900 megahertz frequency.

**6.1.4** Notify contractors/vendors not to use RF producing devices listed in paragraph 5.1 within the MTF.

**6.2** Chief, Equipment Management Branch will:

**6.2.1** Advise Facilities Branch concerning installation/purchase of new RF equipment compatibility.

**6.2.2** Conduct annual EMI/ESD awareness classes to employees.

**6.2.3** Investigate all EMI/ESD related accidents.

**6.2.4** Be responsible for EMI/ESD Program.

**6.2.5** Maintain cell phone monitors.

**6.3** Chief, Information Management Division (IMD) will Coordinate with Facilities and Equipment Management Branch on :

**6.3.1** The purchase and installation of RF devices.

**6.3.2** Use of RF frequencies.

**6.3.3** Power and signal distribution for automated equipment.

**6.4** All departments will:

**6.4.1** Enforce this policy within the MTF.

**6.4.2** Familiarize employees with this policy.

**6.4.3** Ensure vendors/contractors comply with paragraph 6.5.

**6.4.4** Contact Equipment Management Branch prior to purchase of any RF devices listed in paragraph 5.1.

**6.5** Vendors/Contractors will:

**6.5.1** Report to Facilities Branch and/or Equipment Management Branch prior to performing work within the MTF.

**6.5.2** Ensure equipment they are working on is either in Service Mode or will not interfere with medical equipment within the MTF.

**6.5.3** Be given access to work areas in Equipment Management Branch and Facilities Branch to work on portable RF equipment.

The proponent of this publication is the Chief, Logistics Division. Users are invited to send comments and suggested improvements on DA Form 2028 directly to Commander, USAMEDDAC, ATTN: MCXJ-LO, Fort Huachuca, Arizona 85613-7040.

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Appendix A  
LIST OF ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
AR	Army Regulation
CB	Citizen Band Radio
CECOM	U.S. Army Communications-Electronics Command
CDRH	Center for Devices and Radiological Health
CFR	Code of Federal Regulations
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
ESD	Electrostatic Discharge
FDA	Food and Drug Administration
HERTZ	Unit of measurement in cycles per second of electromagnetic radiation
IEC	International Electrical Commission
MED	Medical
MEDCOM	U.S. Army Medical Command
MEDDAC	Medical Department Activity
MIL	Military
MTF	Medical Treatment Facility
STD	Standard
TB	Technical Bulletin
TM	Technical Manual

Transceiver A walkie-talkie or base unit. A communications device where receiver and transmitter are manufactured within one case.