



UNITED STATES AIR FORCE MARS

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MARS -- The Military Auxillary Radio System

Not since WW-II has the US Homeland been under such grave threat of lethal violence from both external and internal malevolent forces. Frequent news accounts of terrorist acts in Europe and the Middle East inspire gratitude that such acts have not happened here since the 9-1-1 World Trade Center attack. Civilian and military intelligence as well as Federal, state and local law enforcement agencies report many terrorist plots have been interdicted in the early stages without public notice. Importantly, alert citizen observations and tips often aid such interdictions and aid in the capture of perpetrators before they act.

A respected class of alert citizens, American amateur radio operators, provide vital intelligence and communications resources supplementary to public service and safety agencies when natural and man-made disasters strike, such as hurricanes, tornadoes, floods, earthquakes; plane crashes, and other area-wide events threatening lives and property. The allocation of precious radio spectrum to amateur radio is largely justified by the element of emergency communications capability, not the hobby aspect. Two formal institutions harness Amateur Radio resources during emergencies: The Radio Amateur Civil Emergency Service (RACES) and the Amateur Radio Emergency Service (ARES).

ARES is organized under the American Radio Relay League (ARRL) whereas RACES is under the sponsorship of the Federal Emergency Management Agency (FEMA) and is intended to become an integral part of the local Emergency Management organization, an “unpaid employee,” if you will. ARES was originally organized to handle “health and welfare” messages but in a number of jurisdictions, has taken on a much broader role. Today, the roles of RACES and ARES are much the same with one major difference. ARES, as well as most all other amateur radio operations, will be required to go silent under certain scenarios while RACES, operating under tightly controlled conditions, will still be available to provide supplemental communications for local government agencies. RACES is activated during and after the emergency when emergency management agencies require communication support. ARES is activated before the emergency, during and continuing for a while afterward. Depending upon how the local jurisdiction has set up its amateur radio volunteer services, either RACES or ARES will handle emergency message traffic, as needed, between emergency management officials.

The importance and contribution of RACES and ARES are legendary. However, when terrorist acts or major catastrophic events covering significant US territory occur, a third communications service can become vital. Under these conditions, agencies of the Federal Government, particularly the Department of Defense (DoD), the Federal Emergency Management Agency (FEMA), and other US Government agencies will come into play. One of the “tools” the Federal Government has in its “tool kit” is MARS.

Not a reference to the Red Planet, MARS stands for Military Auxiliary Radio System. As with ARES and RACES, MARS utilizes licensed amateur radio operators to originate and relay key information pertinent to major regional natural and man-made emergencies rising to the level of interest to the Federal Government, primarily the DoD or one of its information consumers. MARS is a cooperative manifestation of the US Air Force and US Army.



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Unlike Amateur Radio, MARS operations occur on military HF and VHF frequencies and are strictly business. MARS nets are directed by Network Control Stations according to strict protocols for check-in recognition and passing message traffic. Ham-style round-tables, rag chews, CQs and DXing are not allowed.

MARS membership appeals to individuals possessing an interest in public service, patriotic duty, and an interest in advanced digital communications. MARS operations might potentially lead to interdiction of harmful plots and the timely provision of relief to citizens affected by significant disasters. MARS membership requires passing written and operations proficiency tests. For example, one of the desired accomplishments of the MARS radio operator is to develop the ability to sound indistinguishable from a military radio operator operating on a military frequency. Upon successful testing, MARS members are issued military call signs for exclusive use on MARS frequencies.

Amateur Radio Stations used in MARS service must meet certain minimum requirements, including: Highly frequency stable HF SSB and digital operation well-outside the civilian Amateur Radio spectrum allocations, and capable of at least 400 Watts RF output power into the antenna system. Ideally, quick frequency agility is helpful during MARS communications exercises and under actual emergency conditions in which the net control station orders rapid QSY to an alternate frequency. Automatic Link Establishment (ALE) capability is desirable but not mandatory. Military VHF and UHF repeaters are selectively available for tactical unit coordination.

MARS network check-in and interaction with other MARS stations occurs by voice using USB, but all message traffic requires a PC computer interfaced with the transceiver to encode and transmit, as well as receive and decode digital modulation formatted messages. The requisite software is made available to MARS members via secure means.

Readers familiar with earlier MARS operations might recognize the absence of legacy modes such as AM and CW. Today's digital transmission modes provide much greater time efficiency and operations message security. No more message pads and cumbersome phonetic verbal message transmission. It's all digital nowadays.

Many current and retired military personnel and governmental contractors are well acquainted with the "phone patches" between off-shore personnel and stateside personnel. While MARS still has that tasking, it is not now as heavily utilized due to cell phones and global satellite communication. However, the mission of MARS has taken on a much broader scope. Details will be revealed once you are a licensed MARS member.

21st Century MARS meets the 21st Century challenges confronting the United States of America. If you have the necessary equipment and are intrigued by the disciplined approach to military-style communications, can, and will, meet the monthly participation time requirements, contact us at 888.778.6277 or via email at join@afmails-mil.us. We'll be pleased for the opportunity to discuss your qualifications to join our ranks of service to our country through Air Force MARS.



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