

**Attachment A**  
**Federal Fiscal Year 2012**  
**9<sup>th</sup> Year Grant - ASPR**  
**HAM Radio Specifications**

**Radio**

In order to ensure operating capabilities in all frequency ranges used by the HAM organization, it will be necessary to have a radio unit or units that operate in the VHF/UHF and HF ranges. This will allow short intermediate and long-range communications.

**Antenna**

Separate antennae for the UHF/VHF and HF radios will provide the best performance. An inverted V dipole antenna (when physically possible) would work best for the HF bands radio. The addition of a tuner may be required for the HF antenna to ensure maximum gain. A dual band vertical antenna will work best for the VHF/UHF bands.

**Power Supplies**

Additionally, the HAM based radios will require a separate power source to convert AC to DC. Purchasing two power converters will ensure a back up in case one unit fails.

**Installation**

Coaxial cable with the proper fittings will be required to connect the radio to the antenna. The amount of cable required will vary based on each facility's physical layout. A minimum requirement for end-to-end fully shielded cable will help ensure your radio installation does not interfere with existing computer networks.

**Comments**

It will be important to consult with your regional HAM experts regarding equipment options and installation advice.