

## AN/ARS-6A Radio Set

The AN/ARS-6A (V) Radio Set, consisting of a Control Display Unit, a UHF Receiver/Transmitter, an Antenna Set, and a Remote Display Unit, is an essential part of the AN/AYD-1 Combat Search and Rescue (CSAR) Personnel Locator System (PLS). This radio set works in conjunction with an AN/PRC-112 handheld radio transponder in order to precisely locate downed or missing pilots – in a single pass under harsh conditions – while concealing the warfighters’ position from the enemy. As the integral airborne component of the PLS, the AN/ARS-6A (V) provides the rescue team with the terminal area communication, identification, direction, and distance to the survivor’s radio



To mitigate the current maintenance and repair problems of the current AN/ARS-6 (V) Radio Set, while substantially decreasing both the initial and lifetime cost of operation, ACI has initiated the following engineering re-design approach. With this new radio set, ACI will implement an open architecture design to eliminate unique, custom, and proprietary hardware/software of the current legacy system. By making extensive use (wherever possible) of durable and affordable commercial-off-the-shelf (COTS) components and sub-assemblies, ACI is assisting the Army in moving away from the negative impact of sole-source procurement arrangements. Operational life of the system will be extended through improvement in MTBF, due to fewer failure-prone components.

The most visible impact of the ARS-6A (V) to the warfighter will be provided through reduced maintenance and supportability requirements at the Line Replaceable Unit (LRU) level of the system. This in turn, substantially decreases the quantity and severity of field returns to the depot. The significance of an ARS-6A implemented with Software Defined Radio technology, affords the warfighter an ability to change, upgrade, or modify waveforms, increasing capabilities in joint rescue situations. There will be improvements in field-to-depot repair turnaround times due to a finer application of built-in-test algorithms below major sub-module levels. The warfighter will also be able to take advantage of enhanced functionality such as a five-fold increase in the available number of communication channels. Ultimately, the ARS-6A defines a clear path to expanded interoperability with newer survival radios such as those





that are CSEL, GPS, HOOK, and COSPAS-SARSAT enabled, as well as communication systems geared towards network-centric warfare.

**Government Partners**

<b>Agency</b>	<b>Role</b>
U.S. Army Communications Electronics Command (CECOM) – Logistics and Readiness Center - Ft. Monmouth , NJ	Contracting Agency
U.S. Army Depot at Tobyhanna, PA (TYAD)	Field testing and qualification
U.S. Army Redstone Arsenal: Redstone Technology Transfer Center (RTTC) - Huntsville, AL	EMC and air worthiness testing
UH-60M - Blackhawk Modernization Program Office	Platform integration testing
Combat Survivor Evader Locator (CSEL) Joint Program Office	CSEL interface
PMA-299 / MH-60S Avionics Systems Project Office	CSEL interface