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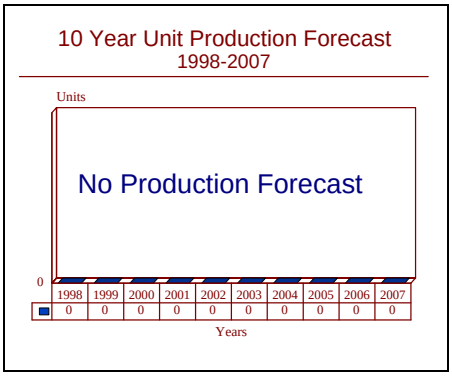
ARC-200 - Archived 9/99

Outlook

- Production complete
- **This report will be dropped next year, 1999**



Orientation

Description. High-frequency transmitter and receiver.

Sponsor

US Air Force
Ogden Air Logistics Center
7981 Georgia Street
Hill AFB, Utah (UT) 84056-5990
USA
Tel: +1 801 777 7221

Contractors

AlliedSignal Inc
Electronic and Avionic Systems
23500 West 105th Street
Olathe, Kansas (KS) 66061
USA
Tel: +1 800 366 5464

Status. Production complete.

Total Produced. Through 1992 (the last year of production), approximately 436 units were produced.

Application. F-16A and F/A-18 aircraft.

Price Range. Though no contracts were specific enough to aid in making a determination of price, the ARC-200's unit cost has been estimated at US$30,000, a figure 20 percent higher than the basic ARC-199.

Technical Data

Design Features. The ARC-200 is essentially a ruggedized version of the ARC-199 HF transceiver. The set consists of the RT-1449 receiver-transmitter, CU-2312 antenna coupler and KVC-979 antenna.

Specific improvements include increased tolerance of higher temperature environments typical of high-speed fighter operations. Designed to operate in the 2 MHz to 30 MHz frequency range, the ARC-200 provides 280,000 communications frequencies with 100 Hz spacing. The set can store and recall, in less than 50 milliseconds, any one of 20 preset channels. The set, which provides 200 watts output, can also be programmed to alert the pilot when his particular call sign is addressed.

The RT-1449 receiver-transmitter weighs 27 lb and measures 7.25 inches high by 8 inches wide by 17.5

inches long. The CU-2312 antenna coupler weighs 11.5 lb and measures 3.5 inches high by 7 inches wide by 13.5 inches long.

To conserve space, the ARC-200's components are mounted in the leading edge extension of the wing. The HF-SSB radio is compatible with MIL-STD 1553A/B, and operates without a dedicated display unit, thus further saving cockpit weight and space.

Operational Characteristics. The unit has built-in test capabilities which aid in system maintenance. Original manufacturer King Radio Corp (1984) claimed a reliability of 1,000 hours mean time between failures (MTBF), and a total service life of over 10,000 hours per unit.

Variants/Upgrades

No variants or upgrades have been identified.

Program Review

Background. Development of the ARC-200 began in 1983, initially to support the sale of F/A-18 aircraft to the Royal Australian Air Force. These aircraft needed radios able to operate several hundred miles offshore beyond line-of-sight range. Bendix Radio Corp (as the company was then called) developed the ARC-200, based on its ARC-199, under contract to McDonnell Douglas. First deliveries of the new radio were made in 1985. Deliveries of the F/A-18 aircraft to Australia were completed in 1988.

The ARC-200 found its next position in 1986 on a modified F-16A, which the US Air Force selected as the new Air Defense Fighter (ADF) to be flown by all 11 Air National Guard units assigned to the air defense mission. General Dynamics won a US$633 million contract that year to produce the retrofit kits plus spares for 270 F-16As going to the ADF role.

While the F-16A retrofit left the aircraft's original radar, the APG-66, intact, it involved a few changes to the avionics – including the addition of an ARC-200 radio. The retrofit kit also included the AIM-7 continuous wave illuminator; upgrades to improve radar search/ track capability against cruise missiles and accommodate the AIM-120 AMRAAM; AIM-7/AIM-120 dual-mode launchers; Mk 12 IFF; a crash-survivable flight data recorder; provisions for GPS; and a night identification searchlight.

In February 1989, General Dynamics awarded Allied-Signal's Bendix/King Division (formerly Bendix Radio Corp) a US$30 million contract to supply ARC-200 HF communications sets for the Air Force's F-16A ADF conversion program. This program was completed in 1991.

AlliedSignal produced and delivered the last ARC-200 radios in 1992.

Funding

No funding for the ARC-200 has been identified within current US budget documents.

Recent Contracts

No recent contracts have been identified.

Timetable

Month	Year	Major Development
Feb	1981	KHF-950 commercial version of the ARC-199 introduced
	1982	ARC-199 selected as standard Army HF radio
Jul	1983	ARC-200 development began
	1985	First deliveries of ARC-200 (F/A-18)

Nov	1986	ARC-200 selected for F-16A
	1988	F/A-18 deliveries to Australia completed
	1991	F-16A ADF conversion completed
	1992	End of ARC-200 production

Worldwide Distribution

In addition to the **US** Air National Guard F-16 ADF application, the ARC-200 is employed by **Australia**, **Kuwait** and **Spain** on F/A-18 aircraft.

Forecast Rationale

The apparent lack of US funding or contracting activity indicates that placement of the ARC-200 radio aboard F-16s was completed with the Air Defense Fighter conversion program in 1991. Additional production consisted of exports for the F/A-18 platform.

As of this year (1998), production has been complete for six years, and there will be no further orders. All that remains is aftermarket support, which continues to be offered by the manufacturer.

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