

AN/ARC-220 Advanced High Frequency Aircraft Communication System



Advanced data communications system providing digital connectivity.

Military users need an easy to operate, multifunctional, fully Digital Signal Processing (DSP) high frequency radio for rotary wing applications. That's why Rockwell Collins designed the ARC-220, providing embedded Automatic Link Establishment (ALE), serial tone data modem, text messaging, GPS position reporting and anti-jam (ECCM) functions.

With the ARC-220 designed specifically for rotary wing applications it allows the pilot to keep his eyes out of the cockpit.

Our ARC-220 is fielded on all U.S. Army Blackhawk, Chinook and Apache helicopters and has identical capabilities to the VRC-100 which is fielded by the U.S. Army at Aviation Tactical Operation Centers.

KEY FEATURES/USER BENEFITS

- ▶ Embedded Automatic Link Establishment (ALE) offers best clear channel connection (JITC certified)
- ▶ Embedded ECCM and data modem (JITC certified)
- ▶ Automatic Quick Call ALE (AQC-ALE)
- ▶ Securable Automatic Position Reporting - (V)3/(V)4
- ▶ Securable Binary Messaging with ARQ protocol - (V)3/(V)4
- ▶ Form/fit/function retrofit of existing AN/ARC-199 installations

**Rockwell
Collins**

Building trust every day

SPECIFICATIONS

Frequency	2.0000 - 29.9999 MHz in 100-Hz steps
Channels/Nets	20 programmable simplex or half-duplex 20 programmable ALE scan lists 12 programmable ECCM hop sets
Frequency Stability	3.3×10^{-7} over operating temperature range
Emission Modes	USB & LSB-voice and data, CW, and AME
ALE	IAW MIL-STD-188-141B Appendix A Appendix A Quick Call AQC-ALE – JITC certified 26 July 2002
ALE Linking Protection	ALE Linking Protection AL1, AL2, & AL3 (MIL-STD-188-141B Appendix B)
ECCM	IAW MIL-STD-188-148A (with ALE) – JITC certified 18 July 2002 IAW CR-CX-0218-001 (Army Enhanced)
Modem	IAW MIL-STD-188-110B and STANAG 4285 – JITC certified 18 July 2002
Power Requirements	+28 V dc per MIL-STD-704 (550 W max)
Reliability	1000 hours MTBF minimum
Fault Isolation/Detection	95% LRU fault detection 98% fault isolation (LRU level)

FIELD REPROGRAMMABLE

Mission Data	DS-101, EIA-232, MIL-STD-1553B
Transec Keys (RT-1749/URC)	DS-101
Software (OFP)	IAW MIL-STD-2217

RECEIVE

Characteristics	IAW MIL-STD-188-141B
Sensitivity	-111 dBm signal for 10 dB (S+N/N)

TRANSMIT

Characteristics	IAW MIL-STD-188-141B
Power Output	3 levels: 175 W pep (100 W avg) 50 W and 10 W
Antennas	Shorted loop, open loop, open wire and 50 ohm resistive

INTERFACES

Audio Voice	0 or up to +17 dBm (50 mW) max, 150 ohm balanced
Audio Data	1 mW (0 dBm), 600 ohm balanced
Secure Voice/Data Operation	Compatible with KY-100 (AIRTERM), USC-43 (TACTERM)
Data Sources	1553, EIA-232C, GPS (Time & Position)

ENVIRONMENTAL

Operating temperature	-40°C to +55°C
Storage temperature	-51°C to +85°C
Altitude	25,000 ft maximum
Humidity	95%
Vibration	2.5g
Operational shock	20g
Crash safety shock	40g
EMI	IAW MIL-STD-461D

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronics solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

For more information contact:

Rockwell Collins
400 Collins Road NE
Cedar Rapids, Iowa 52498
800.321.2223
319.295.5100
Fax: 319.295.4777
E-mail: collins@rockwellcollins.com
Website: www.rockwellcollins.com/gs

**Rockwell
Collins**

Building trust every day