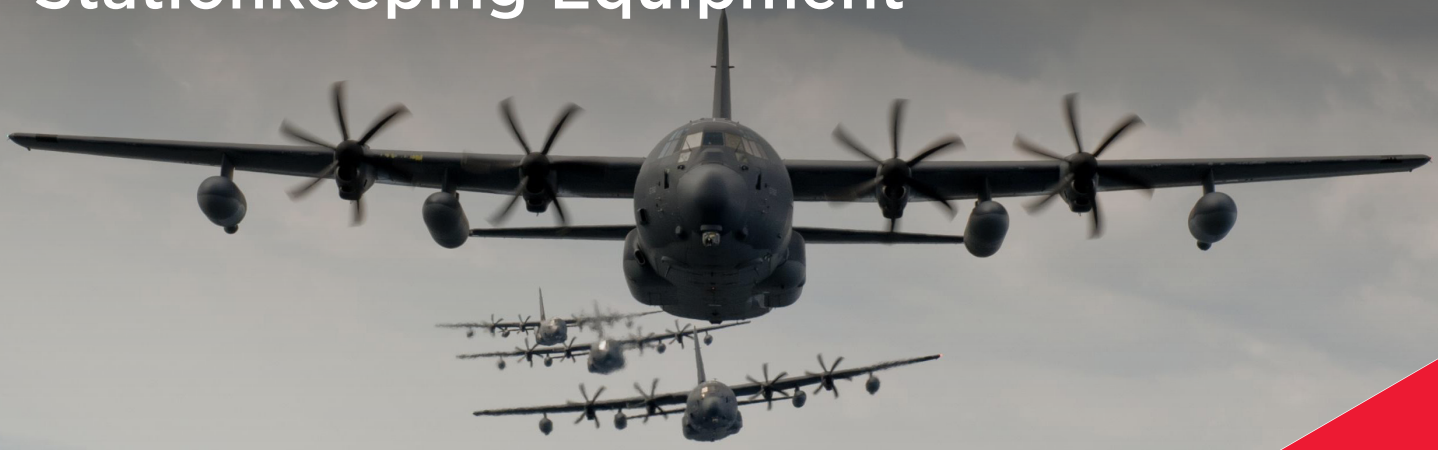
SKE
Stationkeeping Equipment



The MC-130Js fly in formation. Photo courtesy of the United States Air Force by Senior Airman Peter Reft.

AN/APN-243 STATIONKEEPING EQUIPMENT 2000

AVIONICS FORMATION POSITIONING SYSTEM.

The Leonardo DRS AN/APN-243 Stationkeeping Equipment (SKE) 2000 is an avionics formation positioning system that allows up to 36 aircraft on four different frequency channels to fly fully instrumented formation in zero visibility. The aircraft can operate within a ten nm radius of a selected participating master system on the same frequency. The system was designed to upgrade technology and reduce weight, size and cost of the AN/APN-169A, B and C SKE versions.

The AN/APN-243 upgrades earlier versions of the SKE or fully integrates with new or existing mission computers and flight management systems. The upgrades retain complete interoperability with over 800 installed systems of Air Forces worldwide.

LEONARDO DRS

AN/APN - 243 STATIONKEEPING EQUIPMENT 2000

HIGHLIGHTS

- Rugged avionics system
- Self-contained RF and processing
- Qualified and in production for C-130J
- Four RF channels on 3.3 GHz to 3.6 GHz
- Up to 30 aircraft per channel
- GPS independent
- Cooperative system with assigned master and selectable flight leader aircraft
- Max range: 10 nm to master - 20 nm formations
- software developed to DO-178B Level A
- Mil-Std-1553B remote terminal
- Interoperable with AN/APN-169C

FUNCTIONS

- RF measurements of range and bearing
- Data link attitude, altitude and intention
- Deterministic, non-contention based multiple access network
- Situational Awareness of all formation aircraft
- Proximity warning
- Leader following
- Corroboration of critical measurements

ANTENNA SYSTEM SPECIFICATIONS

DIRECTIONAL ANTENNA

Weight	4.5 lbs. (2.0 kg)
Dimensions	5.0 H x 25.5 W x 3.8 D inches 12.7 H x 72.4 W x 9.7 D cm
Output power capability	+60 dBm
Gain	+60 dBm
Beam width Azimuth Elevation Polarization	 13.0º 40º Vertical

PEDESTAL

Weight	6.8 lbs. (3.1 kg)
Dimensions	7.06 H x 8.37 D inches 17.9 H x 21.3 D cm
Power	115 VAC, 400 Hz, 3 phase, 26 VRMS resolver
Cooling	Natural Convection

OMNI ANTENNA

Weight	1 lb. (0.45 kg)
Dimensions	7.55 H x 2.88 W x 1.0 D inches 19.2 H x 7.3 W x 2.5 D cm

SYSTEM COMPONENTS CONTROL MODULE (CM)

PARAMETER	SPECIFICATION
Weight	24 lbs. (10.9 kg)
Dimensions	7.0 H x 11.9 W x 15.0 D inches 17.8 H x 30.2 W x 38.1 D cm
Power	24 VDC @ 4 amps
Cooling	Natural convection
Mounting	Sheet metal tray, no isolators

TRANSMIT/RECEIVE MODULE (TRM)

PARAMETER	SPECIFICATION
Weight	8.6 lbs. (3.9 kg)
Dimensions	6.9 H x 5.6 W x 10.8 D inches 17.5 H x 14.2 W x 27.4 D cm
Power	From the CM input power +140 VDC +/- 5% at 1/3 amp
Cooling	Natural convection
Mounting	Sheet metal mount, no isolators

Airborne & Intelligence Systems

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