Title: Sources Sought Notice VHF Communication Transceiver

Purpose:
The KC-135 Program Office is conducting market research to identify potential vendors capable of providing a digitally controlled Very High Frequency (VHF) Communications Transceiver and VHF Data Radio (VDR) that is, civil-certified VHF transceiver designed for both commercial and military aviation environments.

Salient physical characteristics require the radio to fit within the constraints of the designed mounting plate. To ensure the transceiver physically fits on the designated aircraft mounting plate, specifically designed for the standard Collins Aerospace MMT-125 part number is 622-9670-002 Modular Mounting Tray (2.5 CMU)

Unit must meet the following precise physical constraints:

- Height: 3.44 inches (87.4 mm) max
- Width: 2.50 inches (63.5 mm)
- Depth (Length): 14.12 inches (358.47 mm)
- Weight: Approximately 3.5 to 4.0 lbs (1.6 kg to 1.8 kg)

Mandatory minimum functional characteristics include:
Frequency Range: Extended frequency range covering 118.000 MHz to 152.000 MHz (covering military extended ranges).

Channel Spacing: Digitally selectable 25 kHz and 8.33 kHz channel spacing RF Output

Power: Minimum output power of 18 watts (providing operational coverage up to 200 nautical miles) with up to 25 watts transmitter capability

Data-Link Operation: Supports VDL (VHF Data Link) Mode A, Mode 2, and CPDLC applications.

Radio must be capable of performing Built-In Test (BIT) and be capable of providing BIT results to the flight deck.

Mandatory minimum compatibility characteristics include:

Power Requirements: 28 VDC aircraft power

Tuning Buses: ARINC 429 high-speed Input/Output (I/O) bus and Commercial Standard Digital Bus (CSDB) tuning

CMU / FMS Integration: Must support legacy VDL (VHF Data Link) Mode 2, CPDLC, ADS-C, ATIS, and ACARS applications. The transceiver must seamlessly integrate with the KC-135's existing Communications Management Unit (CMU) architecture. Specifically, it must feature an ARINC 750 data interface that is fully compatible with the onboard CMU-4000 / CMU-900 units to ensure uninterrupted data-link operations.

CPDLC Capability: FAA and EASA approved for En-Route CPDLC (often requiring Service Bulletin SB-8 or SB-13)

Must be MIL-STD-810 and MIL-STD-461compliant

To work with the current wiring design, it must be compatible with a 653-4005-002 Male-TL 66 connector.