



DEPARTMENT OF THE ARMY  
US ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND  
AVIATION AND MISSILE RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER  
5400 FOWLER RD  
REDSTONE ARSENAL, ALABAMA 35898-5200

REPLY TO  
ATTENTION OF

RDMR-AEB-G

11 Jun 10

MEMORANDUM FOR Program Manager Air Warrior, SFAE-SDR-SAC (Perry Smith),  
Redstone Arsenal, AL 35898-5000

SUBJECT: Airworthiness Assessment of the Communication Enhancement and Protection System (CEPS), PN CEPS203-TTC-KIT, on the HGU-56/P Aircrew Member Flight Helmet to be worn on CH-47D/F, OH-58D and UH/HH-60A/L/M (TN 82476)

1. Reference:

a. Operator's Manual for the Communication Enhancement and Protection System (CEPS, Helmet Mounted), June 3 2010.

b. Installation Procedures for Hear Through System, June 3 2010.

2. The Communication Enhancement Protective System (CEPS) is a technology insertion approach to amplify outside noises for the aircrew during escape and evasion and to equip aircrew members with the ability to communicate with individuals not wearing a helmet during events such as medical events, ground operations, etc. When the CEPS is activated, the two microphones, mounted externally on the helmet, amplify the audio signals and the user hears them through the CEPS earpieces.

3. The Aviation Engineering Directorate has reviewed the Communications Enhancement and Protective System from an engineering and airworthiness point of view, and it is approved for use with the following comments:

a. No crewmember shall have CEPS turned on while in flight or inside the aircraft while the Auxiliary Power Unit (APU) or Aircraft Engines are in operation.

b. CEPS compatibility with the ICS is not substantiated.

c. Permanent hearing damage could occur if CEPS is turned on in a high decibel environment.

d. Performance of CEPS in close proximity to the aircraft with rotors turning is not known. Crewmembers should anticipate turning CEPS off when approaching an aircraft on the ground with rotors turning.

e. Operate CEPS IAW reference 1 a.

f. Installation of the CEPS on the flight helmet shall be IAW reference 1 b.

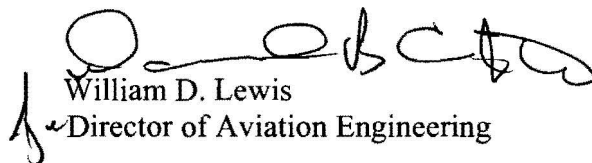
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g. Operation has not been substantiated after exposure to non-operational storage in low temperatures. Recommend an operational check of the equipment after exposure to any non-operational storage temperatures below -50°F (-46°C).

4. The points of contact are Ms. Brianna Haynes, RDMR-AEB-G, (256) 313-5251, email: [brianna.haynes@us.army.mil](mailto:brianna.haynes@us.army.mil) and Mr. Jeff Helton, (Support Contractor, Camber Corporation), (256) 313-8957, email: [jeffrey.d.helton@us.army.mil](mailto:jeffrey.d.helton@us.army.mil).

  
William D. Lewis  
Director of Aviation Engineering