

SAA09CU08-025

5050234HF
Attachment
Sheet 10 of 12

Critical Item: Conference Card, Central Summing Network
Total Quantity: 8
Find Number: OSN Conference Module: Rack Slot 5 & 6 (4)
 OSN Output Module: Rack Slot 17 & 19 (4)
Criticality Category: 1S

JUN 10 1997

SAA No: 09CU08-025	System/Area: OIS-D/ L00
NASA Part No: 79K20325-1	PMN/ Name: U72-1445/ OIS-D
Mfg/ Part No: None	Drawing/ Sheet No: 79K20325-1 1

Function: Conference Cards perform voice-data summation and parity checking. The card combines two digital voice-data inputs and provides a single summed output to succeeding stages.

Critical Failure Mode/Failure Mode No: No/ Incorrect Output/ 09CU08-025.001

Failure Cause: Internal component failure

Failure Effect: Loss of summed voice data from one or both inputs to the card resulting in loss of operational communications to Off-Net (analog interfaces) or Industrial Area (Common Channel users).

Common Channel and Off-Net voice-path failures are not detectable by OIS-D system software diagnostics, hardware or Tech Control Operators. Failure of the OIS-D during hazardous/critical operations could delay emergency communications which could allow loss of life and vehicle.

Detection Method: Loss of communication. **Time To Effect:** Immediate.

ACCEPTANCE RATIONALE

Design:

- The Conference Card is an OIS-D unique design by NASA DE.
- Electrical design per 79K28118, Hardware General Design Requirements Specification For The OIS-D.
- Fabrication of electronic circuit boards per MEFC-STD-154 as modified and supplemented by 79K28000.

Test:

- OMRSD File VI requires annual functional testing of Common-Channel and Off-Net primary and standby voice-paths.

9705211=P90372

P.29 02814835020 407 867 3151 TO 82814835020

OCT 29 '97 12:59 FR

SAA090U08-025

JUN 10 1997

Attachment
Sheet 11 of 12

- OMI D2087 OIS-D Pre-50007 End Instrument Validation is performed for each vehicle flow.

Inspection:

- System users perform voice checks prior to commencing all hazardous operations to ensure that end-to-end communications between essential/critical stations are fully operational.

Failure History:

- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the PRACA database. The PRACA database was researched and no failure data was found on this component in the critical failure mode.
- The GIDEP failure data interchange was researched and no failure data was found on this component in the critical failure mode.

Operational Use:

- Correcting Action:

Hot-Spare components in the redundant CSN are available which can be placed on line to re-establish communications.

- Timeframe:

Variable. Dependent on repair time.

9705211#PE0372

P. 20

107 897 5151 TO 8281463528

OCT 29 '97 12:59 FR