

CRITICAL ITEMS LIST

SYSTEM: EXTRAVEHICULAR MOBILITY UNIT

SUBSYSTEM: SPACE TO SPACE COMMUNICATIONS SYSTEM

ASSEMBLY: SPACE TO SPACE EMU RADIO (SSER) ASS'Y P/N: SED16102580

APPROVAL DATE:

SUPERCEDES REF: N/A DATE: N/A

SHEET 1 OF 4

END ITEM EFFECTIVITY: OV102, OV103, OV104, OV105 AND SUBS

PREPARED BY: Nanci A. Olson

DATE: 12/06/96

APPROVAL

SR&MA

DESIGN

SSCS PROJECT MANAGER:

Matthew O'Leary

DATE:

DATE: 6-30-00

DATE: 6/30/00

CRITICALITY(H/F): 2/2

INTACT ABORT MODE CRIT: N/A

REDUNDANCY SCREENS: A-N/A B-N/A C-N/A

FMEA REFERENCE: SSER-05

NAME: SSER

DRAWING REFERENCE: SED16102580

QUANTITY: 1

CI #	REV	FUNCTION	FAILURE MODE AND CAUSE	FAILURE EFFECT	RATIONALE FOR ACCEPTABILITY
SSER-05	BASIC	<p>1. Provides RF Duplex voice communications between the EMU and Orbiter, other EMUs, and the Space Station</p> <p>2. Provides telemetry from EMU to Orbiter or Station</p> <p>3. Provides caution and status tone to CCA on command from EMU caution and warning system.</p> <p>4. Provides Hardline voice communication between EMU and Orbiter or Station in Airluck</p> <p>MISSION PHASE: Pre-EVA, EVA, Post-EVA</p>	<p>FAILURE MODE: Microphone input open/short</p> <p>CAUSE: Contamination, vibration, shock, EEE parts failure, or temperature cycle</p> <p>MISSION PHASES: Pre EVA EVA Post EVA</p>	<p>SUBSYSTEM: Loss of transmit audio and sidetone to Orbiter Station, and other EMUs. Loss of hardline transmit audio and sidetone</p> <p>INTERFACING SUBSYSTEMS: None</p> <p>MISSION: Terminate EVA.</p> <p>CREW/VEHICLE: No effect.</p> <p>SUCCESS PATHS REMAINING AFTER FIRST FAILURE: 0</p> <p>TIME TO EFFECT: minutes</p>	<p>DESIGN: The electrical design of the SSER is based upon JSC in-house engineering model hardware. Litton is manufacturing the hardware in accordance with the appropriate NHB 5300.4 standards.</p> <p>Passive EEE parts are selected from the guidelines of MIL-STD-975. Active EEE parts are approved by the JSC Engineering Directorate Certified Parts Approval Process.</p> <p>The high, low, and shield output from the microphone are on separate pins in a Bendix 10-550354-35C miniature guide disconnect, bayonet lock connector. M22759 wire is run to the PRI and ALT signal processors and the Hardline audio circuits from an EMI filter connector (5b-736-003 from Spectrum Control). M22759 wire is run from the Bendix connector to the EMI filter connector. Splices are made in accordance with Rockwell specification ME416-0031-1004. Audio circuits on PRI, ALT, and hardline boards are isolated by solid state relays. Cables are laced to avoid strain. The SSER is environmentally sealed to avoid contamination.</p> <p>TEST</p> <p>CERTIFICATION: One time test on Qual SSER. Audio verified before, during, and after exposure to environments.</p>

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