

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 REV. N/A DATE: N/A

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

SHEET 1 OF 4

PREPARED BY: Nancy A. Olson

DATE: 12/06/96

APPROVAL:

SR&MA

DESIGN:

SSCS PROJECT MANAGER:

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-06

NAME: SSER

DRAWING REFERENCE: SED16102580, SED16102617 (Subassembly), SED16102523 (Schematic Diagram)

QUANTITY: 1

CIL #	REV	FUNCTION	FAILURE MODE AND CAUSE	FAILURE EFFECT	RATIONALE FOR ACCEPTABILITY
SSER-06	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 time to CCA on command from EMU caution and warning system</p> <p>4. Provides Hardline voice communication between EMU and Orbiter or Station in Airlock</p> <p>MISSION PHASE: Pre-EVA, EVA, Post-EVA</p>	<p>FAILURE MODE: Open/short of Duplexer input/output board</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 voice to/from Orbiter, Station, and other EMUs</p> <p>INTERFACING SUBSYSTEMS: None</p> <p>MISSION: Terminate EVA</p> <p>CREW/VEHICLE: Loss of Transmit and Receive audio for EVA crewman.</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 SSER duplexer input/output board contains only a printed circuit RF board. The board is housed in an aluminum housing, and held in place through the use of screws. The SSER is environmentally sealed to avoid contamination.</p> <p>TEST: CERTIFICATION. One time test on Qual SSER Audio and RF verified before, during, and after exposure to environments.</p>

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SHEET 2 OF 4

PREPARED BY: Nanci A. Olson DATE: 12/06/96

APPROVAL:

SR&MA: _____ DATE: _____
DESIGN: _____ DATE: _____
SSCS PROJECT MANAGER: _____ DATE: _____

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PREPARED BY: Nanci A. Olson

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