

Six failure modes are identified for the HMM. These are described in the following paragraphs.

## 8.1 FMEA Number - 01-1

- o Date 9-12-86
- o Revision - N/C
- o System - Audio
- o Assembly - Hand-Held Microphone
- o Part Number - SE016101310-305
- o Item Name - Microphone
- o Reference Designation - None
- o Quantity per Assembly - 1
- o Function - Receives user's voice inputs and transforms to electrical signal
- o Failure Mode - Electrical failure of microphone or its wiring; loss of voice transmission
- o Failure Cause - Electrical wire or transducer failure due to food contamination or mechanical shock
- o Mission Phase - On-Orbit
- o Failure Effect on End Item - Loss of communication
- o Failure Effect on Interface - None
- o Failure Effect on Mission - None
- o Failure Effect on Crew - None
- o Failure Effect on Vehicle - None
- o Failure Detection on Ground - Audio Evaluation Test
- o Failure Detection during Flight - Voice Test
- o Correcting Action - Use spare unit or VLHS
- o Criticality (Hardware/Functional) - 3/1R
- o Time Required to take Corrective Action - Estimated 5 minutes
- o Time Available to take Corrective Action - Variable
- o Remarks/Hazards - The HMM microphone and its wiring are vulnerable to damage due to its configuration. The microphone is encased in a thin plastic housing and the wiring is routed to the microphone through the semi-rigid boom which mounts the microphone to the HMM housing. The microphone can also be damaged by clogging its protective screen with food particles.