

# STEREO IMPACT

PROBLEM REPORT

PR-3007

Walpole

2/18/05

PR Numbers: 1xxx=UCB, 2xxx=Caltech/JPL, 3xxx=UMd, 4xxx=GSFC/SEP, 5xxx=GSFC/Mag,  
6xxx=CESR, 7xxx=Keil, 8xxx=ESTEC, 9xxx=MPAe

<b>Assembly : SIT Instrument</b>	<b>SubAssembly :</b>
<b>Component/Part Number:</b>	<b>Serial Number: 01</b>
<b>Originator: Walpole</b>	<b>Organization: UMd</b>
<b>Phone : 301-405-6217</b>	<b>Email : Walpole@sampex.umd.edu</b>

## Failure Occurred During (Check one $\checkmark$ )

- Functional test       Qualification test       S/C Integration       Launch operations

## Environment when failure occurred:

- Ambient       Vibration       Shock       Acoustic  
 Thermal       Vacuum       Thermal-Vacuum       EMI/EMC

## Problem Description

During thermal balance testing, a check of the wiring of the SIT Acoustic Door actuator showed that from the outside of the chamber, the wiring was incorrect. We expected to see about 5 ohms between pins 1 and 6 and between 2 and 7 per table 4.8.3 below taken from the Harness Specification document. We expected pins 1 and 2 to be shorted to each other. Likewise pins 6 and 7.

What we found was 5.5 ohms between pins 1 and 2 and between 6 and 7. Pins 1 and 6 were shorted together, as were pins 2 and 7.

## Analyses Performed to Determine Cause

We consulted the technician who wired the SIT actuator onto J3 on the SIT box. She confirmed that the wiring error was on SIT and was the result of misunderstanding the wording on the Table.

## Corrective Action/ Resolution

- Rework       Repair       Use As Is       Scrap

To allow the SIT door to be opened during TB, a 9 pin – 9 pin adaptor was made correcting the pinout. SIT FM1 harness has been corrected and verified according to the updated drawing. To prevent the problem from occurring on SIT FM2 we have supplied a clarifying schematic (below).

**Date Action Taken:** \_\_\_\_ 3/10/05 \_\_\_\_      **Retest Results:** \_\_Harness verified on both units\_\_

**Corrective Action Required/Performed on other Units**     Serial Number(s): \_\_\_\_ n/a \_\_\_\_

## Closure Approvals

Subsystem Lead: \_\_\_\_\_ Date: \_\_\_\_\_  
IMPACT Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_  
IMPACT QA: \_\_\_\_\_ Date: \_\_\_\_\_  
NASA IMPACT Instrument Manager: \_\_\_\_\_ Date: \_\_\_\_\_

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(From [IMPACTHarnessSpec\\_J.doc](#) Version J – 2004-Mar-24)

## 4.8.3. SIT-P3 (S/C to SIT)

<b>Pin</b>	<b>Signal</b>	<b>Destination</b>	<b>Harness</b>
1	SIT ACT	Spacecraft	#20 TSP w/6
2	SIT ACT	Spacecraft	#20 TSP w/7
3	Spare		
4	Spare		
5	Spare		
6	SIT ACT RTN	Spacecraft	#20 TSP w/1
7	SIT ACT RTN	Spacecraft	#20 TSP w/2
8	Spare		
9	SITchassis ground		

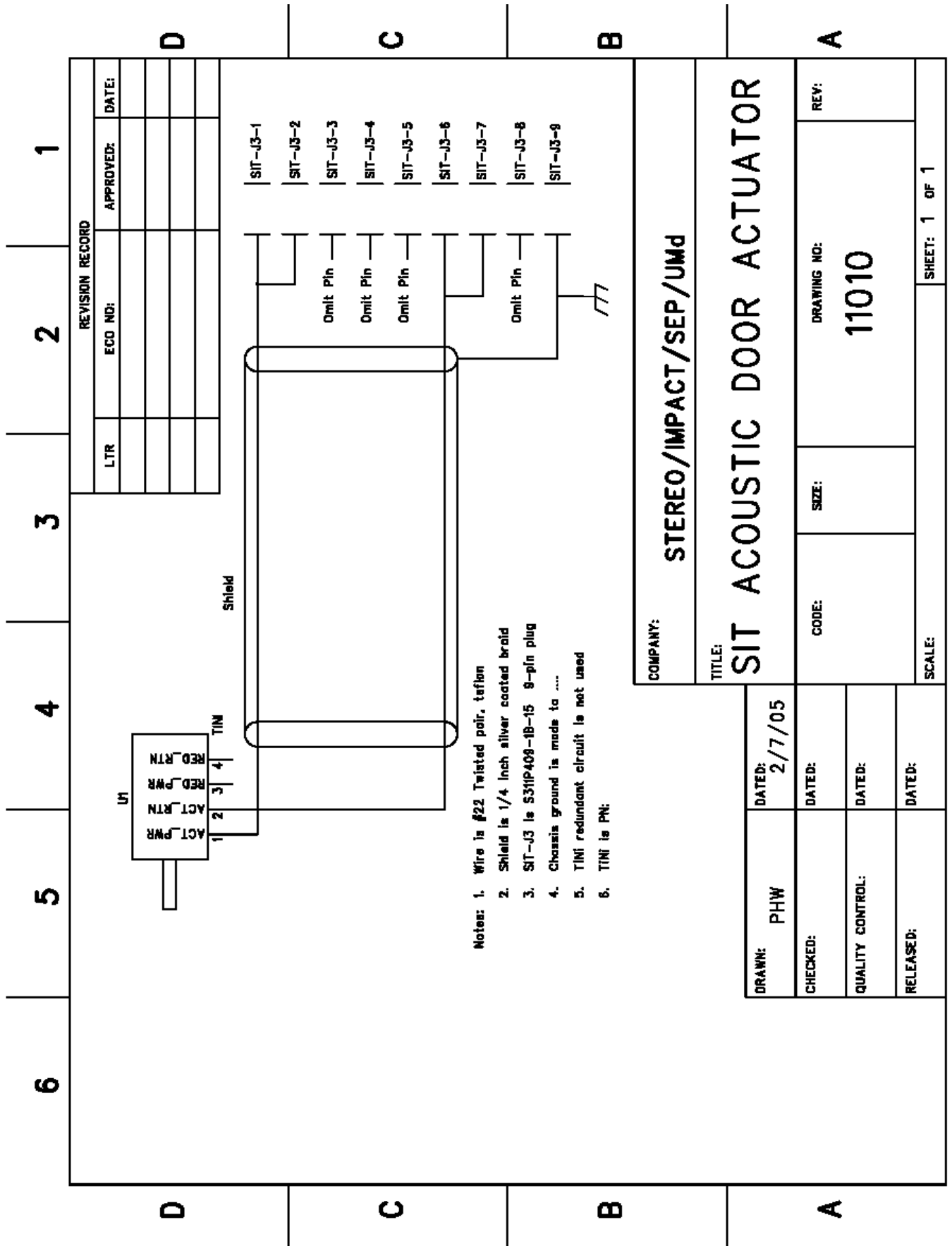
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

COMPANY: <b>STEREO/IMPACT/SEP/UMd</b>	
TITLE: <b>SIT ACOUSTIC DOOR ACTUATOR</b>	
CODE:	DRAWING NO: <b>11010</b>
SIZE:	REV:
SCALE:	SHEET: 1 OF 1

- Notes:
1. Wire is #22 Twisted pair, teflon
  2. Shield is 1/4 inch silver coated braid
  3. SIT-J3 is S31P408-1B-15 8-pin plug
  4. Chassis ground is made to ....
  5. TINI redundant circuit is not used
  6. TINI is PNI:

DRAWN: PHW	DATED: 2/7/05
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED: